

HENRY HUDSON PARKWAY

Extending 11.2 miles from West 72nd Street to Bronx-Westchester
border

New York

New York County

New York

HAER NY-334

NY-334

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service

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HISTORIC AMERICAN ENGINEERING RECORD

HENRY HUDSON PARKWAY

HAER No. NY-334

LOCATION: The Henry Hudson Parkway extends from West 72nd Street in New York City, New York, 11.2 miles north to the beginning of the Saw Mill River Parkway at Westchester County, New York. The parkway runs along the Hudson River and links Manhattan and Bronx counties in New York City to the Hudson River Valley.

DATES OF CONSTRUCTION: 1934-37

DESIGNERS: Henry Hudson Parkway Authority under direction of Robert Moses (Emil H. Praeger, Chief Engineer; Clinton F. Loyd, Chief of Architectural Design); New York City Department of Parks (William H. Latham, Park Engineer); New York State Department of Public Works (Joseph J. Darcy, District Engineer); New York Central System (J.W. Pfau, Chief Engineer)

PRESENT OWNERS: New York State Department of Transportation; New York City Department of Transportation; New York City Department of Parks and Recreation; Metropolitan Transit Authority; Amtrak; New York Port Authority

PRESENT USE: The Henry Hudson Parkway is part of New York Route 9A and is a linear park and multi-modal scenic transportation corridor. Route 9A is restricted to non-commercial vehicles. Commuters use the parkway as a scenic and efficient alternative to the city's expressways and local streets. Visitors use it as a gateway to Manhattan, while city residents use it to access the Hudson River Valley, located on either side of the Hudson River. The land adjacent to the parkway includes the Hudson River Valley Greenway and the railroad (Amtrak), each of which affords outstanding views of the Hudson River, the Palisades, and New York City. The parkway system connected by the parkway includes major city and state parks, recreational and cultural facilities, natural areas and scenic overlooks. Bridges and tunnels link upland neighborhoods to the river.

SIGNIFICANCE: The Henry Hudson Parkway represents an important achievement in the fields of transportation, landscape architecture, and community and regional planning. It is also significant for its

association with the evolving social, cultural and economic changes that transformed America into the premier automobile nation. Robert Moses and his engineers conceived and constructed the Henry Hudson Parkway during the height of the American parkways movement; as such, its design fulfilled the ideals of “parkway” as “a park with a road.” The road took advantage of natural and man-made terrain, offered easy access to recreational areas, passed through pleasant urban and suburban landscapes, and presented the magnificent scenery of the Hudson River. The parkway was more than a destination; it was also designed to be a free-flowing conduit between the metropolis and outlying suburbia. In this respect, the parkway presaged the era of post-World War II highways engineered primarily for transportation efficiency. The Henry Hudson Parkway is a milestone in roadway design, displaying in its conception and execution a unity of aesthetics and engineering.

HISTORIANS: Elizabeth Michell and Katharine Reed, September 2005
Justine Christianson, HAER Historian, 2005-2006, with
contributions by Christopher Marston, Project Leader, 2005-2006

**PROJECT
INFORMATION:**

The Henry Hudson Parkway Recording Project is a multi-year project conducted by the Historic American Engineering Record, a branch of Heritage Documentation Programs (Richard O’Connor, Acting Manager), a division of the National Park Service, U.S. Department of the Interior. The New York Metropolitan Transportation Council (Joel Ettinger, Executive Director) funded the documentation. Nancy O’Connell (New York Metropolitan Transportation Council) facilitated the project. The Riverdale Nature Preservancy’s Henry Hudson Parkway Task Force, Hilary Hinds Kitasei, Chair, provided assistance.

The summer 2005 documentation team consisted of Christopher H. Marston, Project Leader, and Justine Christianson, HAER Historian. Elizabeth Michell (Colorado State University) and Katharine Reed (Bard Graduate Center) served as historians during summer 2005. Matthew Stutts of Cultural Resources GIS completed GPS and ArcView maps of the parkway.

TABLE OF CONTENTS

Introduction	5
Description	6
West 72 nd Street to George Washington Bridge	7
Riverside Drive and Park, West 72 nd Street to 155 th Street	13
George Washington Bridge to Henry Hudson Bridge	15
Henry Hudson Bridge to Van Cortlandt Park	20
Van Cortlandt Park to Westchester County Line	22
Guide Rails	23
Signage	24
Surface	25
Curbs	25
Drainage System	25
Early History of the Henry Hudson Parkway Corridor	26
Parkway and Parkway Precedents	30
The Henry Hudson Parkway in the Region	32
Envisioning the Henry Hudson Parkway	33
Robert Moses	33
Financing the Parkway	35
Defining the Parkway	36
Expectations	36
Scope of Work	37
Background of the Project	38
The Controversy	49
The Concept	53
Construction of the Parkway	55
Rigid-Frame Concrete Bridges	57
Girder and Floorbeam Bridges	59
Westchester County to Dyckman Street	60
Henry Hudson Bridge, As Originally Constructed	62
Dyckman Street Bridge	63
Dyckman Street to West 72 nd Street	64
Fort Tryon and Fort Washington Parks	64
Riverside Park	65
Henry Hudson Bridge, Addition	66
Safety Features	68
Landscaping	70
Signage	74
Additions to the Parkway	75
Henry Hudson Parkway in Use	78
The Completed Parkway	78
The Reaction	79
The Impact	80
Safety Improvements	83

Parkway Connections	84
George Washington Bridge	84
Miller Highway	86
Riverside Park South	87
Hudson River Valley Greenway	87
Into the Future	88
Conclusion	89
Appendix A: Inventory	90
Bibliography	198

INTRODUCTION

On a cold rainy day in December 1936, Robert Moses opened the Henry Hudson Parkway (HHP), declaring: “There is nothing new in New York, at least in the field of physical public improvements... We do not invent great city plans in these days. We simply discover and inherit what others have recommended long ago....”¹ Moses was of course being deliberately modest, because by the completion of the entire Henry Hudson Parkway in October 1937, the public could see that this parkway was indeed something new and grand on an unprecedented scale. The construction of the parkway was part of the West Side Improvement, a joint endeavor of the Henry Hudson Parkway Authority, New York City Department of Parks, New York State Department of Public Works and the New York Central Railroad. The project included completing the West Side Highway from Canal Street to West 72nd Street, covering the railroad tracks from West 72nd to 125th streets, reclaiming the deteriorating Riverside Park along that same stretch, building the new Henry Hudson Parkway from West 72nd Street to the city limits in the Bronx, and constructing the long-promised Henry Hudson Bridge across the Harlem Ship Canal. Robert Moses finished the project in an astounding three years. The resulting West Side Improvement and parkway

for its entire length down to the tip of Manhattan Island, constitutes one of the greatest public projects ever undertaken in any city. Riverside Drive, now that through traffic passes along the parkway at the river’s edge, is an elongated park and drive surpassed by few similar developments anywhere. The parkway makes a superb approach to and provides an unequalled view of the city.²

It provided motorists with easy access to the magnificent scenery and recreational areas of the Hudson River on both the Manhattan and the New Jersey shores (through the parkway connection to the George Washington Bridge) as well as to the Bronx, Westchester County, and beyond. In addition, the parkway formed an important transportation link in the projected network of parkways and roadways designed to connect all points in Manhattan with each other and with the rest of New York and the surrounding regions.

The Henry Hudson Parkway was a superb expression of the parkway ideal. Using the Bronx River Parkway in Westchester County as a prototype, the HHP was not only a roadway but also a reclamation project that improved the Hudson River shoreline. The HHP was a grade-separated, limited access, divided road winding through the scenery of the Hudson River corridor.³ It is a parkway in the fullest sense: it is a road that has its own park, the rehabilitated and expanded Riverside Park, and it also connects several

1 The Henry Hudson Parkway Authority, *Opening of the Henry Hudson Parkway and Progress on the West Side Improvement* (New York: The Henry Hudson Parkway Authority, 1936), 7.

2 Cleveland Rodgers, *Robert Moses: Builder for Democracy* (New York: Henry Holt and Company, 1952), 89.

3 There may have been a traffic signal at Fort Tryon Park, but that has not been definitively ascertained.

other city parks (Riverside, Fort Washington, Fort Tryon, Inwood Hill, and Van Cortlandt parks) in a facsimile of Frederick Law Olmsted's idea of a "ribbon" of parks.

The HHP was an evolution in parkway development since it was located in a densely populated urban metropolis with residential development along its corridor. Not only did the parkway capture scenic views of the Hudson River, but also it presented motorists with the New York City skyline and delivered them into the heart of the metropolis. The parkway became an important route to downtown Manhattan as well as a gateway to the city for travelers from the north. It filled the need for a route through the city as automobile usage evolved from a recreational diversion to a serious mode of transportation. The dramatic scenery and route of the HHP remain a testament to Moses' vision of a free flowing road through some of the city's most beautiful natural and manmade landscapes.⁴

DESCRIPTION

The Henry Hudson Parkway (HHP), officially designated Route 9A, is a limited-access parkway that runs along the east side of the Hudson River, through the New York City boroughs of Manhattan and the Bronx.⁵ It extends a total of 11.2 miles from West 72nd Street in Manhattan to its terminus at the Saw Mill River Parkway on the border of the Bronx and the City of Yonkers in Westchester County. The Henry Hudson Parkway is a component of a regional transportation system, linking the West Side Highway with parkways on either side of the Hudson River as well as the interstate systems to the north and east.⁶ In addition, the HHP converges with interstate highway I-95, which stretches from Maine to Florida, at the George Washington Bridge interchange.⁷ The HHP is also an important component of the regional recreational system since it connects and provides access to five major New York City parks, including Riverside, Fort Washington, Fort Tryon, Inwood Hill, and Van Cortlandt parks. Over the 11-mile

4 Riverside Park and Drive from West 72nd to 129th streets has been listed on the National Register of Historic Places; Riverside Park and Drive from West 72nd to St. Clair Place has been designated a New York City Landmark. In addition, the Hudson River Valley Greenway, the New York State Scenic Byway Advisory Board, and Scenic America have identified the parkway as a potential scenic byway.

5 Several highways make up Route 9A. It is known as the West Side Highway from Battery Place in Lower Manhattan to West 72nd Street. South of West 57th Street, 9A has characteristics of an urban boulevard with distinctive streetscaping and park infrastructure and elements. There are stoplights at long intervals to provide access to the route. In 1999, it was proposed that the West Side Highway be renamed Joe DiMaggio Highway for its entire length between Battery Place and West 72nd Street. The elevated portion of West Side Highway between West 59th and 72nd streets is called the Miller Highway after Julius Miller, Manhattan Borough President during the 1920s. The Henry Hudson Parkway officially encompasses the section of Route 9A that extends from West 72nd Street to Saw Mill River Parkway (which terminates at a junction with I-684).

6 Westchester County parkways include: Saw Mill River, Hutchinson River, and Sprain Brook.

7 Just over the George Washington Bridge in New Jersey, I-95 meets with the Palisades Interstate Parkway, a limited access roadway that cuts northward through Palisades Interstate Park, a strip of parkland along the west side of the Hudson River. Palisades Interstate Parkway continues into New York State, terminating at Harriman and Bear Mountain state parks, both in Bear Mountain, New York.

parkway, engineers provided seventeen vehicular access points, beginning at West 72nd Street and ending with the Mosholu Parkway. Throughout each of the parks, there are access points for pedestrians to reach the Hudson Riverfront as well as the recreational opportunities of the park. The parkway includes four major interchanges that incorporate a complex system of ramps and roadways. These are located at West 79th Street at the Rotunda, West 96th Street, the George Washington Bridge, and the Mosholu Parkway. Most of the other interchanges can be classified as “minor” since they are comprised of a single system of partial cloverleafs, each with underpasses, overpasses and ramps.

The HHP travels through a varied urban and suburban landscape unified by the Hudson River. The urban landscape includes views of the New York City skyline and the George Washington Bridge interchange in Manhattan, while the Bronx offers a suburban landscape of single and multiple family residences. Both sections include landmarked churches and iconic monuments. Throughout its route, the HHP follows the topography of the area through which it travels, creating a varied and pleasurable driving experience.

Since the parkway serves the important role of linking five major New York City parks, the following description includes important features of those parks, particularly in Riverside. Moses conceived of the development of Riverside Park and the Henry Hudson Parkway simultaneously, so that the two are seamlessly integrated. Therefore, describing the parkway without Riverside Park would remove the context of the parkway. The following description is of the current conditions of the parkway and the parks that it connects, following a south-to-north route.

Henry Hudson Parkway, West 72nd Street to George Washington Bridge

From West 72nd to 155th streets, the parkway travels through Riverside Park. The topography is such that the parkway sits between the Hudson River and the western edge of the ridge on which Riverside Drive and parts of Riverside Park have been built. Throughout Riverside Park, pedestrian underpasses and overpasses provide access to either side of the parkway, limiting its intrusiveness. Riverfront access will be further improved by the completion of the Hudson Greenway, a pedestrian-bike path that currently follows the river from West 70th to 83rd streets and is then detoured because the parkway runs too close to the river from West 83rd to 91st streets. The Greenway is planned to eventually extend 150 miles from New York City to Albany, although it has only been completed in Manhattan and has not yet been developed in the Bronx. From West 100th to 129th streets, the Greenway is part of Cherry Walk. When Cherry Walk terminates, the Greenway continues on 12th Avenue beneath the viaduct to West 135th Street then under and alongside the parkway to West 145th Street beyond Riverbank State Park. One journalist noted in the *New York Times* in 1980 that Moses introduced “the six-lane intrusion of the Henry Hudson Parkway, which continues to send automobiles racing through the park. But even this unpleasant road, which cuts the park off from direct contact with the river could not detract from the beauty of the park and river.”⁸

⁸ Paul Goldberger, “Discovering the Pleasures of City’s Great Boulevard,” *New York Times*, October 3, 1980, C1. The history of Riverside Park is covered later in this report.

The article failed to mention that Moses had removed the intrusion of the railroad and created a public park in its place by developing the park and parkway. Furthermore, the use of similar building materials, such as broken range work masonry and granite, provided visual continuity between the parkway and parks structures. The shoulders of the parkway are narrow through Riverside Park, so there are periodic pulloffs for emergency use, such as the pulloff between West 86th and 87th streets. The only available parking areas are on the west side of the parkway, accessible from the southbound lanes at West 94th and 99th streets.

The southern end of the HHP begins at the terminus of the elevated section of the West Side Highway, at West 72nd Street. An interchange at West 72nd Street takes traffic from Manhattan's Upper West Side neighborhood onto the northbound section of the HHP. The abandoned steel supports for the original southbound lanes of the Miller Highway can be seen here. A viaduct built in 1937 carries the HHP over the railroad tracks in this location. The 830'-6" riveted steel girder viaduct is carried on steel piers, and jersey barriers have been placed on top of the viaduct's steel parapet. It abuts a pedestrian underpass at West 73rd Street. Broken range work masonry faces the underpass, and granite has been used in the quoins, voussoirs and coping. Concrete blocks form the barrel of the arch. The facade treatment of this underpass is typical of the 1930s era construction of Riverside Park, which is characterized by the use of arches as well as materials like granite, bluestone and concrete. The viaduct is a remnant of the 1929 McKim, Mead & White plan for the park that specified enclosing the railroad in a tunnel designed to look like a Roman aqueduct. The West 73rd Street underpass connects paths on the east and west sides of the parkway, providing pedestrian access to the waterfront, which was an important component of Robert Moses' vision.⁹

The Rotunda, located at West 79th Street, is the first of four major interchanges along the HHP. The top level of the multi-story Rotunda structure consists of a traffic circle located on the west side of the parkway. Low broken range work masonry guard walls with granite coping border the traffic circle, punctuated by light standards atop the walls. The northbound lanes of the parkway have an exit ramp at West 76th Street and an entrance ramp at West 79th Street, which form a half cloverleaf on the east side of the parkway. The face of a concrete arch underpass at the West 79th Street entrance ramp is clad in broken range work masonry and has granite quoins, with a segmental arch featuring granite voussoirs. The underpass measures 26' long and 90.5' out to out. Southbound lanes exit at the West 81st Street ramp before encountering a roundabout

⁹ It should be noted that highway terminology defines the overpass and underpass differently than what is used in this report. Technically, a highway overpass is when the subject highway passes OVER an intersecting highway or railroad. In this case, the subject highway is the HHP, so the West 73rd Street underpass would be an overpass. A highway underpass, in technical terms, is when the subject highway passes UNDER an intersecting highway or railroad. The bridges of the Bronx which cross over the parkway, therefore, would technically qualify as underpasses since the HHP passes under them. The terminology used in this report deviates from that used by highway engineers because the historical record does not use that terminology.

around the Rotunda. There is an exit ramp at this roundabout that leads to the southbound lanes of the parkway, forming a traffic circle on the west side of the parkway.

Once past the Rotunda at West 79th Street, the northbound lanes of the parkway take a slightly higher grade than the southbound, allowing for views of the Hudson River to the west. Both the north and southbound lanes consist of three lanes each, separated by a median of variable width.

At West 83rd and 84th streets is a rigid frame concrete arch underpass that allows pedestrians to cross under the parkway and travel from one side of the park to the other. The underpass is faced with broken range work masonry while the arch has a granite voussoir. The barrel of the underpass consists of concrete blocks painted white.

The parkway gently curves after West 83rd Street to run more closely along the Hudson River before turning back inland beginning at West 89th Street. There are a number of underpasses in this area that allow pedestrians to access either side of the park. One pedestrian underpass is located between West 92nd and 93rd streets and allows pedestrian access to the river as well as motorist access from the southbound to the northbound lanes of the parkway or to Riverside Drive. The rigid frame concrete underpass, which has a 12'-8" clearance, is clad in the ubiquitous broken range work masonry. Granite was used in the voussoir of the elliptical arch, the quoins on the abutment, and the coping. At the underpass between West 92nd and 93rd streets are ramps on both the south and northbound lanes of the parkway. The northbound ramp exits to Riverside Drive at West 95th Street, and there is also an entrance ramp at this location. The two ramps are separated by a triangular grassy median. The short entrance ramp here is typical of 1930s ramp design, with a tight curve requiring quick acceleration for cars entering the parkway and fast deceleration for exiting traffic. The shortness of the ramps causes little impact on the surrounding landscape, resulting in minimal usage of valuable parkland.

The second major interchange of the HHP is at West 96th Street, where there is another exit ramp on the northbound side as well as an entrance ramp that allows traffic to either enter northbound lanes or travel under the parkway via the West 100th Street underpass and then enter the southbound lanes via an entrance ramp. The West 100th Street underpass is similar to the West 93rd Street underpass. Granite quoins and voussoirs break up the expanse of broken range work masonry that faces the rigid frame concrete elliptical arch underpass. A broken range work masonry wall with granite coping separates pedestrian traffic from motorists. Drivers on the southbound lanes can exit at West 95th Street and travel under the parkway via the West 93rd Street underpass. They can then either reenter the northbound parkway lanes or exit at West 95th Street. At West 94th Street on the west side of the parkway is a parking area that has been closed to use. Another parking area at West 99th Street on the west side of the parkway has been recently refurbished and is currently open to the public. Cafes are located at the Boat Basin at West 96th Street.

Drivers exiting the parkway at West 96th Street traveling east pass under Riverside Drive, which is carried over West 96th on a 1902 decorative bridge exemplifying City Beautiful aesthetics. Symmetrical arches of articulated granite blocks are located at either end of the underside of the bridge and allow pedestrians to continue under the bridge on the sidewalks. The bridge itself consists of riveted steel arched girders with a metal railing that is 108' long and 97.8' out to out. The elliptical arches have voussoirs and decorative keystones of granite. Masonry wing walls extend from the granite arches and feature granite coping and granite pillars. The masonry bridge abutments have a granite coping. A granite balustrade on both ends unifies the abutments and arches.

Since the parkway runs so close to the river in the section of the park from West 100th to 129th streets, the recreational areas are all to the east of the parkway, filling the space between the parkway and Riverside Drive. At West 119th Street, the north and southbound lanes of the parkway break further apart before returning to run alongside one another at West 125th Street. The northbound lanes at West 119th Street have a long exit ramp running to West 129th Street. A concrete wall with regularly spaced "piers" of three vertical lines encloses the tracks; it is not known if this was a later addition. Around West 124th Street, the railroad tracks come out of the tunnel in which they were enclosed through Riverside Park and run in the open air. Broken range work masonry clads the portal opening on the side, while the front opening reveals the steel girder construction, now covered in graffiti.

The parkway runs between the Hudson River and the railroad from West 129th to 135th streets. The Manhattan valley cuts through this area, so Riverside Park ends at West 129th Street and picks up at West 139th Street. Due to this cut, viaducts carry Riverside Drive and the parkway to maintain the grade. Riverside Drive Viaduct has open spandrel parabolic arch ribs, and a coursed stone masonry retaining wall with access steps. It was built ca. 1897 and is 1809' long and 81'-7" out to out, terminating at West 135th Street. The parkway had to be carried via a steel girder viaduct as well. The landscape of this section of parkway is quite different as a result, characterized by commercial buildings and billboards, which dominate the viewshed of Riverside Drive. Under the parkway viaduct are maintenance areas and access roads to the Hudson River, while St. Clair Place and commercial buildings like the Fairway grocery store are under Riverside Drive.

Steel girder pedestrian overpasses cross Riverside Park, the railroad tracks, and the HHP at West 138th and West 145th streets. They were built in 1989 to provide pedestrian access to Riverbank State Park, which is located from West 137th to West 145th streets on the west side of the parkway. The West 138th Street pedestrian overpass is painted green and has chain link fencing along a concrete parapet. Paired concrete piers support the West 145th pedestrian overpass. It has a concrete parapet with chain link fencing. Riverbank State Park sits on top of the North River Water Pollution Control Plant, which was built on a reinforced concrete platform set on piers sunk into the Hudson River. Construction began on the plant in 1972, and preliminary sewage treatment operations started in 1986; it was the first time in New York City history that raw sewage was not

dumped into the Hudson River.¹⁰ Riverbank State Park, designed by Richard Dattner, was constructed in the 1980s. As originally conceived of by architect Philip Johnson, the park would have had four fountains and a reflecting pool. Instead, the park features active recreational facilities like a baseball field, tennis courts, playgrounds, swimming pool, track, and skating rink. There is also a cultural center, cafe and waterfront amphitheater. Riverbank State Park is the only state park facility in Manhattan. It also has the distinction of being the only park built on top of a sewage treatment plant outside of Tokyo.

From West 137th to 153rd streets, the parkway sweeps several yards further inland. To the east of the parkway are Riverside Park and Drive, along with the exposed railroad tracks, while to the west of the parkway are Riverbank State Park and Riverside Park. The topography of this section is such that Riverside Drive is at a higher grade than the parkway, so a retaining wall was necessary. From West 135th to 158th streets, Riverside Drive has a heavy masonry block retaining wall underneath it, and from West 153rd to 155th streets, the drive cantilevers over the exposed New York Central Railroad tracks. This section was built as part of the 1911 extension of the drive. At West 151st Street, a circular terrace overlooked the park and river. This rotunda was once topped by a conical pavilion. A set of stairs led down to a hillside terrace, from here the path continued across a pedestrian steel Warren truss bridge over the exposed railroad tracks at W. 151st Street, which was built in 1927. This overlook is the last of four elements from the original Riverside Drive that remains intact (the others were destroyed by the construction of the Riverbank State Park) and may have been the inspiration for the design of the promenades, arches and loggias that appear throughout Riverside Park.

At West 148th Street, flights of stairs lead down to an overpass, which crosses over the parkway to Ten Mile River Playground on the west side of the parkway. The playground contains not only play equipment, but also basketball courts and baseball fields. The stairs to the overpass have a metal handrail in the center, as well as masonry and metal handrails on either side and regularly spaced light standards. There are also cast metal light standards flanking the start of the overpass that stand on stone piers and feature a decorative faunal motif at the base. The fencing along the overpass is decorative as well with scrolls placed at regular intervals along the chain metal fencing. The entire overpass, stretching 108' long, is painted green. At the west end of the overpass, a set of metal stairs leads down to the other side of the park. The stairs extend north and south from a broken range work masonry abutment with granite quoins, and have two landings, the highest of which are supported by piers. The stairs end at a half-circle landing of stone.

Under the southbound parkway lanes at West 148th Street is a pedestrian underpass that differs from the majority of park architecture because it is constructed of reinforced concrete without any type of masonry cladding. The lack of masonry cladding causes it

10 Scott Aiges, "An \$80-Million Park Planned Atop Treatment Plant," *New York Times*, August 4, 1985, R7.

to look unfinished, even though it does feature a voussoir around its semi-circular arch. The underpass measures 23' long and 80' out to out. The other feature of note is a parking area at West 149th on the west side of the parkway that is accessible from the southbound parkway lanes.

To allow pedestrian access from Riverside Drive, over the railroad tracks, and into the park, there are pedestrian bridges at West 151st and 155th streets. The 120' long pedestrian bridge at West 151st is a steel Warren truss. It was built in 1927 to provide access for pedestrians from Riverside Drive, which has a circular overlook at this location, over the railroad tracks and down to the shores of the Hudson, where there was a sand baseball lot.¹¹ The riveted steel Pratt through truss bridge at West 155th was built in 1908. The 109' long pedestrian bridge extends out from an arch delineated by a voussoir in the coursed masonry wall under Riverside Drive.

From West 154th to 160th streets, viaducts carry the HHP due to the deep valley in this area. The viaducts are steel with concrete jersey barriers and steel piers. Beneath the viaducts are maintenance areas and access roads to the riverfront. Around West 158th Street, the HHP moves further inland and begins the ascent to Washington Heights. The median widens and contracts until West 171st Street, where the northbound lanes head further inland and the southbound stay to the west. The grassy and tree-filled areas between the north and southbound lanes are part of Fort Washington Park, the second major park along the HHP's route. Fort Washington Park, totaling over 158 acres, extends from West 155th to Dyckman streets. It encompasses the site of Fort Washington (used during the Revolutionary War) and is located in what is now called Washington Heights. The land for Fort Washington Park had to be "acquired in four separate proceedings. The land for the original park was taken in 1894 and ran from 171st to 183rd Streets. Additional acquisitions, north and south of the original park, came in 1919, 1925, and 1926."¹² The park now contains baseball fields, basketball courts, tennis courts, a playground, and is adjacent to the famous landmarks of the George Washington Bridge and the Little Red Lighthouse.¹³ The Greenway continues through this area west of the parkway.

11 See "West Side Improvement, South from 153rd St Viaduct," 6/1/35, neg. no. 3038/5759, New York City Parks Department Photo Collection, Arsenal (hereafter cited as the Arsenal); also can be seen in: "View North from 145th St," 5/16/38, neg. no. 13471, Arsenal, and "Riverside Drive West 152nd St," Percy Loomis Sperr, Photographer, 1940, in Photographic Views of NYC, 1870s-1970s, Humanities and Social Sciences Library, call no. 0967-F2, dig. id. 722804F, New York City Public Library Digital Gallery (hereafter cited as NYPL Digital Gallery).

12 Henry Hudson Parkway Authority, "Before and After 1637-1937," in *Opening of the Henry Hudson Parkway and Progress on the West Side Improvement* (New York: Henry Hudson Parkway Authority, 1936), 17.

13 New York City Department of Parks & Recreation, <http://www.nycgovparks.org>, accessed April 2006. Photographs of Fort Washington area available: "Cabrini Boulevard, West 181st Street," Percy Loomis Sperr, Photographer, 1938, in Photographic Views of New York City, 1870s-1970s Manhattan, Humanities and Social Sciences Library, call nos. 0761-D6, 0761-D7, 0761-D8, dig. id. 717968F, NYPL Digital Gallery; "Cabrini Boulevard-181st West," Percy Loomis Sperr, Photographer, 1938, in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call nos. 0761-E1, 0761-E2,

At West 160th Street, both lanes of the parkway cross over the railroad tracks, which then run on the western side of the parkway. The parkway lanes are carried via steel girders ending in coursed masonry abutments that give way to a rough cut, more “natural” wall.

Fort Washington Park contains two pedestrian bridges that cross over the railroad tracks that run between the parkway and the river. The first is located at approximately West 175th Street and was built in 1930. It spans 120’ and is 12.8’ out to out. The arched riveted steel girder pedestrian bridge is painted green, as is the scroll and wire mesh railing. The bridge’s abutments are broken range work masonry with granite quoins. Two cast light standards flank both ends of the bridge. On the west end of the bridge, two flights of stairs lead down to the Hudson River Valley Greenway trail. Broken range work masonry covers the stair walls, which have granite coping and landings. To the east, a pedestrian trail leads to Riverside Drive at West 165th Street. The second pedestrian bridge is in the general location of West 181st Street and carries the Hudson Greenway trail over the railroad just north of the George Washington Bridge over a dramatic railroad cut. The steel Pratt truss bridge has a wooden deck and the addition of a sturdy metal barricade wall on both sides. Fort Washington Park also contains an underpass at West 173rd Street that runs beneath the southbound Henry Hudson Bridge lanes and allows pedestrian access to park trails. A 1925 cast iron light standard stands on the east side of the underpass.

Riverside Drive and Park, West 72nd Street to 155th Street

Robert Moses’ plan to rehabilitate Riverside Park provided many active and passive recreational activities in a landscape planted with London planes, cherry trees, honey locusts, multi-stem crabapples, pin and red oaks, and sweet gums and bordered by the Hudson River and Riverside Drive. Creating an accessible and pleasant waterfront was an important feature of Robert Moses’ 1930s West Side Improvement plans. The undertaking included covering the existing railroad tracks and creating a promenade on top, in addition to building recreational facilities. Dumping fill and then building a seawall along the riverfront further extended the shoreline and created additional parkland. The individual features in the park have been listed in an inventory in Appendix A of this report.

The significant structures in the park share architectural details and building materials. The Rotunda, located at West 79th Street, is a major landmark of the park since it is a gateway both to the park and to the Hudson River waterfront, illustrating Moses’ desire to provide waterfront access. The Rotunda itself is a 1937 multi-level structure clad in broken range work masonry. Its top level is a parkway traffic circle located on the west side of the parkway. On the next level of the Rotunda is a courtyard with three arched openings leading from the courtyard to the seasonal West 79th Street Boat Basin Cafe,

which visitors access by stone steps. The voussoirs of the arched openings are granite, as are the piers. The second level originally had a circular pool of water in the center with a dolphin fountain. Beyond the cafe is a large terrace overlooking the West 79th Street Boat Basin, where there is a pier, 105 boat slips, and public launch sites and moorings.¹⁴ The terrace facade is elaborately detailed with a granite ledge table supported by carved granite ovolo brackets. The basement level houses a 200-car garage, accessed by a curved ramp from the traffic circle on the top level. The Greenway also passes by the boat basin.

Another important structure in the park is a promenade, constructed from 1936 to 1937, that covers the New York Central Railroad tracks from West 83rd Street to 91st streets. The top of the promenade was for pedestrians, with occasional sets of stairs leading down to ball fields and other active recreational opportunities below. The walls of the promenade were clad in broken range work masonry and concrete poured to look like clapboard siding. Granite was used as detailing for the voussoirs, coping and other quoins. The section of the promenade from West 83rd to 84th streets has a five arch arcade clad in broken range work masonry with granite used in the quoins and corbelled coping as well as the voussoirs and piers. The arched openings have been filled in with decorative metal fleur-de-is grilles.

From West 101st to 110th streets runs another promenade, built as part of the covering of the railroad tracks in Riverside Park. At West 101st and 102nd streets, a set of stairs leads down to the soccer field and track. Beveled granite copings top the parapet and stair wall. Arched openings, windows and bronze doors punctuate the facade. The promenade wall behind the baseball fields at West 103rd and 104th streets features two arched windows opening to the railroad tracks with concrete voussoirs as well as a set of stairs leading down from the promenade to the fields. The Hudson beach volleyball courts and café are located on multiple levels at West 105th and 106th streets and are another significant park structure. They were constructed during the 1930s era renovation of the park. Stairs lead from the promenade level to the café, which occupies five arches with granite voussoirs and piers and overlooks the courts below. Outdoor seating is available at the café. A set of bluestone and granite steps in an elliptical shape provides access to the sand volleyball courts. From West 106th to 108th streets, the concrete wall with clapboard façade treatment is punctuated by windows, which allowed railroad passengers to see the Hudson River and provided ventilation. There is a triple arched arcade near West 109th Street that has the typical broken range work masonry with granite voussoirs and piers. At West 110th Street, the terminus of the promenade, there is an overlook paved in bluestone with painted black metal handrails set in granite coping. Stairs lead down from this overlook to the skate park below.

The section of Riverside Park from West 119th to 129th streets features a shelter that is very similar to Inspiration Point located on the parkway at West 190th Street. Located to

14 Information on the Boat Basin from <http://www.riversideparkfund.org/ThePark.htm>, accessed January 2006.

the west of Grant's Tomb at West 123rd Street, the shelter features Doric columns supporting a coffered wood ceiling, with stairs flanking the structure and leading down to restrooms on the bottom floor. Theodore Videto, a Parks Department architect, designed the shelter in 1910.¹⁵

In addition to the recreational facilities throughout the park, most of which date to the 1930s reconstruction of the park directed by Robert Moses, Riverside Drive has memorials scattered along its length. These memorials are representative of the City Beautiful movement, in which architecture was seen as a way to uplift the city's residents. A complete listing of the memorials along with additional information can be found in the inventory located in Appendix A.

Henry Hudson Parkway, George Washington Bridge to Henry Hudson Bridge

Extending from West 171st to 180th streets, the most complex and expansive interchange on the parkway is the series of thirty bridges, over and underpasses, and ramps at the junction of I-95 and the double deck George Washington Bridge (see HAER No. NY-129). This third major interchange on the HHP is a complex network that connects I-95, US 1, the Trans-Manhattan Expressway, Riverside Drive, and Broadway (US 9). The Trans-Manhattan Expressway runs east from the George Washington Bridge between West 178th and 179th streets to the Harlem River; it connects both levels of the bridge with Amsterdam Avenue, Harlem River Drive, and the Washington Bridge (181st Street Bridge) over the Harlem River. The Trans-Manhattan Expressway (I-95) connects with the Cross-Bronx, which then connects to the Major Deegan Expressway. The interchange features exit and entrance ramps on both the north and southbound lanes connecting Upper Manhattan roadways, the parkway and I-95. Concrete piers carry the ramps, which have concrete parapets. The system also incorporates dedicated bus ramps and a bus station, called the Bus Station Plaza, at the George Washington Bridge Terminal. Pier Luigi Nervi designed the station, and it was built in 1963. At West 171st Street, northbound, the HHP diverges into one lane for the HHP and another for George Washington Bridge traffic. The four southbound lanes diverge into two left lanes that head off the parkway towards the George Washington Bridge and two lanes that continue as the HHP. Traffic from the bridge onto the southbound lanes enters just south of the bridge from the left.

Located at West 179th Street, the George Washington Bridge is a monumental two-level suspension bridge that carries I-95 across the Hudson River between New Jersey and New York. It is a dramatic landmark along the parkway, even at night when its steel towers are lit for special occasions, the result of a Port Authority project completed in 2000.¹⁶ Othmar Amman designed the George Washington Bridge, and it was constructed

¹⁵ Christopher Gray, "Restoration for an All-but-Ruined Hudson 'Temple'," *New York Times*, February 26, 1989. The article notes that "In 1910, the Real Estate Record & Guide called the 122d Street building 'a riverside ornament'."

¹⁶ See <http://www.nycroads.com/crossings/george-washington/>, accessed January 2006. Some other sources of information about the George Washington Bridge include Carl W. Condit, *American Building: Materials and Techniques from the First Colonial Settlements to the Present* (Chicago: The University of

between 1927-1931, with the addition of two lanes to the upper deck in 1946 and a lower deck in 1962. The 3,500' span bridge features massive steel abutments anchoring the bridge on either side of the river. Both the upper and lower decks carry two-way traffic. The George Washington Bridge was the longest suspension bridge in the world when it opened in 1931.

The north and southbound lanes of the HHP travel beneath the George Washington Bridge. The northbound lanes of the parkway pass under three bridges: a steel girder overpass with concrete piers and rails; a rigid frame elliptical arch with broken range work masonry cladding; and a double deck steel girder bridge with elliptical arch and regular stone voussoirs and spanning wall. The southbound lanes of the parkway travel directly under the George Washington Bridge interchange. The Little Red Lighthouse, subject of a beloved 1951 children's book by Hildegard Swift entitled *Little Red Lighthouse and the Great Grey Bridge*, is located at the southeastern foot of the bridge and is just visible from the southbound lanes. The lighthouse was built in 1921 and deactivated in 1947.

Beyond the George Washington Bridge (West 179th Street), the railroad follows the shoreline of the Hudson River while the parkway is to the east of the tracks. Around West 181st Street, the railroad cut is visible, and the Greenway crosses over it. At West 181st Street, a pedestrian underpass goes under the northbound lanes of the parkway to Riverside Drive. Faced in rustic stone, the underpass arch has a stone voussoir. There is also a steel girder overpass that measures 203'. It runs over the northbound parkway lanes and the George Washington Bridge approach, providing access to the Hudson Greenway. The overpass is for pedestrian use and has a steel railing with chain link fencing.

The parkway hugs the elevated sections of Fort Tryon Park to its east before crossing above Inwood Valley to the eponymous hill of Inwood Hill Park. The northbound lanes mount fairly steep wooded hills, with three lanes of curving roadway. Upwards to Inwood Hill Park, northbound traffic continues to climb through more wooded landscapes on its ascent to the upper deck of the Henry Hudson Bridge. At this elevation, the parkway crosses high above the Harlem River to Spuyten Duyvil, on the western edge of the Bronx. Conversely, the southbound lanes follow the gentle curvature of the northern roadway, but at a lower grade so the opposite lanes of traffic cannot be seen.

Inspiration Point was built in 1925 at West 190th Street, along with the extension of Riverside Drive, and was meant to be a focal point of the drive for both drivers and pedestrians since it overlooks the Hudson and the Palisades beyond. Gustav Steinacher, chief engineer of New York City Department of Parks, oversaw the design of the structure. The shelter measured 26' wide, 106' long, and 16' high and featured Doric

Chicago Press, 1968); H. Shirley Smith, *The World's Great Bridges* (New York: Harper & Row Publishers, rev. ed., 1964); David P. Billington, *The Tower and the Bridge: The New Art of Structural Engineering* (Princeton: Princeton University Press, 1983).

columns holding up a coffered wood ceiling. A rendering by Olmsted and Brunner of Inspiration Point showed a sidewalk along the Hudson, curving in a half circle across the road from the Inspiration Point shelter. Bicyclists were depicted as bravely cycling on the parkway along with cars, which they can now do via the Hudson Greenway.¹⁷ When it opened, Riverside Drive “had a wide sidewalk on the river side; this was an environment where the automobile and the pedestrian were meant to mix agreeably. Drivers were encouraged to stop at the roadside in a large turnoff in front of the \$150,000 shelter, the last stopping place before the end of the drive at Dyckman Street.” By the late 1980s, the structure had deteriorated, so plans were in put in place to clean up the area, replace missing stone, and rebuild the wooden roof with an open trellis “to minimize maintenance costs,” which was completed as evidenced by its current condition.¹⁸ Inspiration Point is barricaded from the road by jersey barriers, making it inaccessible from the parkway.

Fort Tryon Park is the third of the major city parks through which the HHP travels. The northbound lanes of the HHP have an interchange at Fort Tryon Park. Cars may exit to the park road or enter the northbound HHP lanes from the park, but the southbound lanes bypass the park. There is an original lamppost at the interchange and one block further north. The cast iron lamppost is fluted and stamped with “property of the city of New York.” The two presumably date to 1937. Entering Fort Tryon Park from Riverside Drive, the park drive passes under a concrete arch bridge clad in stone. The bridge carries Margaret Corbin Drive, which loops around the Cloisters and connects to Riverside Drive and West 190th Street. The parapet wall of the bridge is clad in stone and has a stone coping (probably granite). This rustic stonework is used throughout the park, such as in the café building, unifying the structures and enhancing the European architectural motifs promoted by the architecture of the Cloisters. There are also two pedestrian underpasses in the park. Both are clad in stone and were built in 1920. One is 12’ long and the other is 40’ long.¹⁹

Fort Tryon Park was originally the home of the C.K.G. Billings estate, which John D. Rockefeller, Jr. purchased and then commissioned Frederick Law Olmsted, Jr. to design a park there in 1925. Rockefeller wanted to demolish the mansion on the property, but outcries over that plan slowed the development of the estate. In 1926, the mansion burned, and the city finally took the donation of the estate from Rockefeller. The 67-acre Fort Tryon Park was completed in 1935. The park’s name comes from the preserved

17 “Riverside Drive Extension, Study for Treatment at Inspiration Point,” Frederick Law Olmsted, Landscape Architect and Arnold W. Brunner, Architect, rendering, Riverside Drive 130th St-End, available at the Museum of the City of New York.

18 Gray, “Restoration for an All-but-Ruined Hudson ‘Temple’,” R12.

19 For historic images of Fort Tryon and Corbin Plaza, see “Riverside Drive-Van Siclen Avenue,” Percy Loomis Sperr, Photographer, 1936, Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call nos. 0842-E5, 0842-E6, and 0842-E7, dig. id. 719807F, NYPL Digital Gallery and call nos. 0842-E2, 0842-E3, and 0842-E4, dig. id. 719806F, and call nos. 0842-D3, 0842-D4, and 0842-D5, dig. id. 719803F, and call nos. 0842-C6, 0842-C7, and 0842-C8, dig. id. 719801F, all in NYPL Digital Gallery.

remnants of Fort Tryon, a Revolutionary War fort named after Sir William Tryon, Major General and the last British Governor of the colony of New York. Corbin Place, at the ridge road entrance to the park, commemorates the area where Margaret Corbin took over fighting the British when her husband was killed in a Revolutionary War battle.

Rockefeller also had the medieval arts branch of the Metropolitan Museum of Art, known as the Cloisters, built at the park. The Cloisters opened in 1938 and housed the medieval art collection of sculptor George Grey Bernard, which Rockefeller had purchased. Charles Collens of Allen, Collens and Willis of Boston, along with the museum staff, designed the building and supervised its construction. The architects of the building employed “architectural elements, dating from the twelfth to the fifteenth century, from five French cloisters—Saint-Michel-de-Cuxa..., Saint-Guilhem-le-Désert, Bonnefont-en-Comminges, Trie, and Froville....In addition to the cloisters the building contains an original chapter house, a reconstructed chapel with important Romanesque elements, a modern chapel in the Gothic style, and eight exhibition galleries for mediaeval sculpture, tapestries, stained glass, paintings and furniture.”²⁰ Fort Tryon Park also features 8 miles of pedestrian paths, unparalleled views of the Hudson River and Palisades across, two playgrounds, and a pavilion that houses a café.²¹ Two other park features are an Art Deco flagpole base with an eagle adorning it situated on a terrace at the fort and a monument to Margaret Corbin. To maintain the view from the park and museum, Rockefeller purchased 700 acres of the New Jersey shoreline known as the Palisades across the Hudson and donated the land as a public park.²² During the Hudson-Fulton celebration, Palisades Interstate Park across the Hudson River in New Jersey was dedicated, the result of efforts by the Palisades Interstate Park Commission to save the cliffs from quarrying.²³

Inwood Hill Park, established in 1916, is the fourth major city park through which the HHP passes. The park contains soccer and baseball fields, tennis courts, and trails, but its natural features are its biggest draw.

Physically, the park consists of two great ridges, rising as high as 220 feet, with a valley in between and lowlands beside the river and Spuyten Duyvil Creek. Indeed, the park—built on giant veins of marble and schist—is something of a primer on New York’s natural history.²⁴

20 James J. Rorimer, “The Opening of the Cloisters,” *The Metropolitan Museum of Art Bulletin* 33, no. 4 (April 1938): 92.

21 New York City Department of Parks & Recreation, <http://www.nycgovparks.org>, accessed April 2006.

22 *Guide to Fort Tryon Park* (New York: New York City Parks Department, 1992); Christopher Gray, “Monumental Remnant from a 1900’s Estate,” *New York Times* (December 22, 1996), R5, gives the date of the sale of the estate to Rockefeller as 1916. See also, Ron Chernow, *Titan: The Life of John D. Rockefeller, Sr.* (New York: Vintage Books, 1999), 643.

23 Stephen Stanne, et al., *The Hudson River: An Illustrated Guide to the Living River* (New Brunswick, NJ: Rutgers University Press, 1996), 134-135.

24 Andrew L. Yarrow, “Exploring Inwood Hill’s Urban Wilderness,” *New York Times*, May 1, 1987, C1.

In addition, the park contains American Indian caves, glacial potholes and Manhattan's only extant salt water marsh, "the last remnant of a network of wetlands that once ringed Manhattan." The Dyckman and Nagel families obtained the land from American Indians that is now encompassed by the park.²⁵ They turned it into farmland, and it was the site of battles during the Revolutionary War. In 1834, Samuel Thomson bought most of this farmland. It was then used as summer homes for the wealthy, and in the early 1900s there were also hospitals, asylums and homes. The New York City Parks Department gradually purchased 196 acres between 1916 and 1941, creating the park.²⁶

Inwood Hill Park contains two pedestrian structures. The first is an arched steel girder footbridge (dating from 1938) that passes over the railroad tracks at approximately West 213th Street. The west side of the 71' span has metal stairs with anti-slip treads and an anti-slip landing supported by riveted steel piers. The east side has a 40' stepped ramp of concrete with 5' treads. This footbridge carries the Greenway, which follows the ridge beneath the parkway until its current terminus at the Henry Hudson Bridge. The second is a concrete arch pedestrian underpass built in 1936 at the approximate site of West 215th Street, under the southbound parkway lanes. The stone-faced concrete arch underpass allows uninterrupted pedestrian access to a trail.

The Dyckman Street Bridge links northbound HHP traffic between Fort Tryon and Inwood Hill parks. Two bridges carry the HHP over Dyckman Street. The four-span open spandrel concrete arch rigid frame bridge carries the northbound HHP lanes and dates to the original construction of the parkway. The 234' long bridge features an ornamental metal balustrade. The concrete façade of the abutments and battered walls have been treated to look like clapboard siding. The steel girder bridge with a green steel balustrade carries the southbound lanes of the HHP. It was built in 1939 to accommodate an alteration in the road alignment. The construction of the Henry Hudson Bridge upper deck resulted in the original road becoming southbound lanes only with a new northbound only road constructed. The original Dyckman Street Bridge was used for northbound traffic, while the southbound traffic used the new bridge.

Between Fort Tryon and Inwood Hill parks on the Hudson River is the Dyckman Street Marina. It had been used from 1915 to 1942 by ferries taking cars and travelers across the Hudson River to the Palisades, but the completion of the George Washington Bridge rendered it unnecessary. The New York City Department of Parks contracted with Dyckman Marine Venture in 1987 to establish a marina, pier and restaurant on the site. Currently, this waterfront park contains a marina and fishing pier as well as the Tubby Hook Café and Bar.²⁷

25 Reginald Pelham Bolton, *Washington Heights—Its Eventful Past* (New York: Dyckman Institute, 1914), 62.

26 Yarrow, C1.

27 See New York City Department of Parks and Recreation website, <http://www.nycgovparks.org>, accessed May 2006.

Henry Hudson Parkway, Henry Hudson Bridge to Van Cortlandt Park

The Henry Hudson Bridge spans the Harlem River and connects the Manhattan and Bronx sections of the HHP. The Henry Hudson Bridge, built from 1935-36 with the addition of an upper deck in 1937, is a fixed plate girder arch with upper and lower decks. Considered an engineering marvel in its day, it was the longest fixed plate girder arch bridge in the world. The upper deck carries three lanes northbound, while the lower deck carries four lanes southbound. The bridge once had two pedestrian walkways, which were located on the west side of the lower level (currently open) and the east side of the upper level (currently closed).²⁸ Granite faced tollbooths for both south and northbound traffic are located on the Manhattan end of the bridge. The current cost per pass through toll is \$2.25. From the upper deck, the statue of Henry Hudson in Henry Hudson Memorial Park, located at West 227th Street and Spuyten Duyvil, is visible just above the trees and buildings to the west of the parkway. The 16' bronze figure of Henry Hudson stands atop a 100' column, funds for which came from the Henry Hudson Parkway Authority. The base of the pedestal features bas-reliefs in addition to an inscription detailing its construction date and funding source. The statue had been planned since the Hudson-Fulton celebration of 1909, but it was not completed until 1938 when the Henry Hudson Parkway Authority pushed it to completion. Karl H. Gruppe sculpted the monument using a model created by Karl Bitter, who died in 1915 and was therefore unable to complete the work himself.²⁹

The Spuyten Duyvil Swing Bridge, constructed in 1899 by the New York Central Railroad, is a steel swing bridge that replaced the original wooden bridge built in 1849 at this location and carries Amtrak. It is visible from the Henry Hudson Bridge. The 610' bridge has three fixed sections on the Manhattan side and one on the Bronx side. The 290' central section pivots on a turntable. It is a Warren truss subdivided with lattice sway braces. At first, a steam engine powered it, but an electric motor replaced it in 1963. The bridge allows Circle Line boats through, but it had to be rehabilitated in 1983 after one of the boats hit the bridge.

After crossing the Henry Hudson Bridge, the parkway enters the Bronx and begins to move further inland away from the view of the Hudson River. The character of the parkway changes as it passes through the Bronx, becoming more suburban in nature with service roads flanking each side. The service roads provide access to and from the parkway, and also create a buffer between private homes and the highway. The service roads are set off from the HHP by curbed and planted medians that contain directional signs as well as light standards. There are also numerous interchanges in the Bronx that

28 Information on pedestrian walkways provided by Ellen Macnow, New York City Department of Parks and Recreation.

29 "Statue of Hudson to Adorn Column," *New York Times*, April 11, 1937, 52; "Hudson Statue Mounted on Memorial Park Base," *New York Times*, January 7, 1938, 3. For image of status, see X-80, neg. 13061.1, ca. 1937; for construction of pedestal with scaffolding, see X-80, neg. 13062, January 3, 1938, and for completed statue, see X-80, neg. 21004, October 9, 1941, all at City of New York Parks and Recreation Photo Archive, Olmsted Center, Flushing Meadows, Corona Park, Flushing, New York (hereafter cited as Olmsted Center).

connect to the service roads along the parkway corridor. In this section of the Bronx, the HHP partially follows the route of the former Spuyten Duyvil Parkway, which the construction of the HHP superseded. The path of the northbound and southbound lanes meanders as the roadway snakes beneath overpasses through the neighborhoods of Riverdale, making another wide turn inland just beyond West 252nd Street. Jersey barriers throughout this section make up the median. The southbound lanes are at a higher grade in some areas. At other points, the roadway cuts into the ridge that stretches from Riverdale through Van Cortlandt Park, while elsewhere, most notably at the western entrance to Van Cortlandt Park, it veers around higher elevations. The remnants of the rocky outcroppings are still visible.

After the Harlem River crossing, the HHP passes over Kappock Street. The 1937 segmental arch Kappock Street bridge has a decorative stone parapet. Stone masonry faces most of the retaining walls that flank the parkway, while part of its barrel and ramp walls are clad in concrete treated to look like clapboard siding. The bridge has a concrete balustrade with chain link fencing that was added later.

Bridges within this section of the Bronx vary greatly and, for the most part, carry local traffic over the HHP. Most are double and triple segmental arched rigid concrete bridges faced in broken range work masonry with beveled-top cutwaters abutting the piers. The stonework detailing varies to make each bridge unique. A rigid frame concrete arch bridge carries West 232nd Street over the HHP. Built between 1936-38, this is a double-segmented arch bridge faced in broken range work masonry that spans 78' and is 63' out to out. The bridge has a beveled-top cutwater on the center pier. Chain link fencing is a later addition. The wing walls are painted concrete. In 1955, a 230' pedestrian bridge was added at West 235th and 236th streets. This is a single span steel girder bridge painted green with chain link fencing, which was added later. Random ashlar masonry faces the ramp walls. At West 239th Street, a 1937 rigid frame concrete arch bridge crosses the parkway with a 9'-9" clearance. It has double segmental arches, and broken range work masonry faces the walls and abutments. There is a rounded decorative cutwater with a corbelled cone top. The central pier is set in a median offset by a jersey barrier. Chain link fencing was added at a later date.

The bridge at Manhattan College Parkway, dating from 1938, crosses the parkway with a 10'-10" clearance and spans 143'. It is a rigid frame concrete arch bridge with triple segmental arches and broken range work masonry. Originally, the parapet would have been simply masonry with a timber guardrail on top. Chain link fencing was installed later on the sidewalk in front of the parapets.

At West 246th Street is a rigid frame, random ashlar-faced concrete arch bridge built in 1938. The abutments and ramp walls have random ashlar cladding as well. Like the other Bronx bridges, chain link fencing was added at a later date to the sidewalk next to the parapet. At West 252nd Street is a rigid frame concrete arch bridge. The 1938 double span has segmental arches, a stepped voussoir, and broken range work masonry cladding on the bridge and wing walls. The span is 85' long. The decorative cutwater has a

beveled capstone. The parapet has granite coping. Chain link fencing was later installed on the sidewalk next to the parapets. The bridge carrying Riverdale Avenue over the parkway was built in 1937 and is 100' long. Like the rest of the bridges, it is a rigid frame concrete segmental arch bridge faced in broken range work masonry with a granite voussoir and abutment. There is a corbelled cone-topped decorative cutwater as well as the ubiquitous chain link fencing. Fieldston Road Bridge was built in 1936. This 86' long rigid frame single span elliptical concrete arch bridge has masonry cladding. Unlike the more refined cut masonry of the other bridges, this one uses larger and more irregular quarry-faced stones that give the bridge a rustic aesthetic. The parkway in this section makes a sharp turn to the east, gently curving to resume its northerly direction once it enters Van Cortlandt Park.

In the Bronx, the parkway bypasses many minor neighborhood parks created when the HHP was first built as well as others added with the aid of former New York City Parks Commissioner Henry Stern's "Greenstreets" program in the late 1990s. Neighborhood advocates tirelessly worked to reclaim other smaller parks. One neighborhood park, Endor, is located next to the Fieldston Road overpass. This woodland garden was established by the community and spearheaded by Hilary Hinds Kitasei.

Van Cortlandt Park to Westchester County Line

Upon entering Van Cortlandt Park, the last of the five major city parks through which the HHP passes, the parkway curves to resume its north/south axis. As the parkway passes through Van Cortlandt Park, it cuts through densely wooded areas. Swathes of hardy grasses and overgrown vegetation cover the ground and trees line the half-mile of the HHP before it connects with the Saw Mill River Parkway in Westchester County.

Van Cortlandt Park is a New York City park spanning over 1100 acres that has recreational facilities, an historic house (Van Cortlandt Manor), an equestrian center, a golf course, sports fields, and trails. The Park Commissioner described the 1,132-acre park in 1908 as "the second largest park in the Bronx system," and

reached from the Botanical Gardens in Bronx Park by the Moshulu Parkway, 600 feet wide, and about a mile and a quarter in length. The old Van Cortlandt Manor House, beautifully situated in a grove of trees, is now the home of the Society of Colonial Dames, who maintain therein a very interesting collection of Revolutionary relics. Here is located the quaint Colonial Garden, considered to be the most beautiful formal garden in the world.³⁰

The park also featured Van Cortlandt Lake, created by owner Jacobus Van Cortlandt by damming Tippet's Brook. The lake served as the setting where "skaters ...frolic in

30 Joseph I. Berry, Park Commissioner, "Park System Known the World Over," *New York Times*, May 17, 1908, B4.

wintertime.”³¹ Features of the park included a 43-acre level field used as militia parade grounds and athletic fields, bridle paths through the wooded hills (touted as being “as delightful as the wilder parts of Northern Pennsylvania”), and a golf course.³²

There is an interchange just within the eastern border of Van Cortlandt Park where a semi-cloverleaf takes north and southbound traffic to and from the parkway and Broadway. A 1937 riveted steel arch girder bridge with a metal balustrade that has an additional layer of chain link fencing added carries the HHP over Broadway. The abutments are constructed of coursed masonry with a masonry parapet topped by a stone coping. The overpass is 94’ long and 80.3’ out to out.

There are two bridges within Van Cortlandt Park. The first is a riveted steel girder pedestrian bridge with a steel parapet that was built in 1937. Chain link fencing has been added. The 116’ long bridge has concrete piers and abutments faced in stonework. The second is the Van Cortlandt Park Equestrian Bridge, constructed in 1937. It is a double span concrete girder bridge with decorative granite cutwaters on its central pier. There is a timber guardrail with chain link fencing added later. The wing walls are clad in broken range work masonry and topped with a granite coping. The central pier, clad in stone masonry, sits in the median of the HHP with jersey barriers surrounding it. The bridge spans 81’ and is 26’ out to out.

The final and fourth major interchange along the HHP is at the Mosholu Parkway. Traffic from the Mosholu Parkway converges with the left lane of the two northbound HHP lanes, just beyond the Major Deegan Extension Bridge. The HHP southbound lanes for the Mosholu Parkway diverge into one lane to the left and travel over the bridge. Two lanes continue southbound, with southbound traffic from the Mosholu Parkway entering from the left just south of the bridge. At Mosholu Parkway is a bridge, dating from 1951, that crosses the northbound lanes of the parkway and interchange, taking traffic from Mosholu Parkway to the HHP southbound. The rigid frame concrete arch bridge has one elliptical arch with a 8.5’ clearance that spans the HHP’s southbound lanes and one semicircular arch with a 7.3’ clearance that spans the lane to the Mosholu Parkway. The bridge is clad in broken range work masonry with a stepped voussoir and a central pier set in the median and surrounded by jersey barriers. The HHP continues to the Westchester County line, where it becomes the Saw Mill River Parkway.

Various elements along the route of the parkway are discussed in further detail below.

Guide Rails

The HHP features various types of guide rails. The New York City Parks Department designed the earliest type, which reflects an Art Deco aesthetic. The rail consists of panels of overlapping vertical metal bars bent to form arcs that are welded to horizontal

31 “City’s Last Colonial Estate to be Sold,” *New York Times*, September 21, 1919, 105. See also “Bronx Takes Pride in Beautiful Parks,” *New York Times*, March 7, 1926, RE1.

32 Berry, B4.

metal bars. The height of the rail is 2'-7". Each panel is connected to a 2 7/8" wide post. The end posts are slightly more decorative, featuring a round knob on top. They are found primarily in Riverside Park and appear in a variety of shades of green, from a brilliant turquoise to a pale spring green. The latter color is a recreation of the original hue. It is unknown which guide rails of this type are original and which are reproductions. A second original guide rail type is the spring cable tension guide rails located on the western side of the southbound lanes of the parkway between West 85th and 96th streets.³³ The third original guide rail type is a low wall of broken range work masonry located just before the Henry Hudson Bridge on the western side of the northbound lanes.

The most common types of guide rails are the galvanized steel W-beam barriers, located sporadically along the length of the parkway, and jersey barriers, located along the parkway and medians from West 72nd to 80th streets in Riverside Park and all along the parkway north of Riverside Park. Many of the jersey barriers have sustained a great deal of damage, generally concrete breaking off that has left the steel skeleton exposed. Jersey barriers replaced the original timber guide rails used in the Bronx. Wood railings are extant only along a ramp leading onto the northbound parkway at the Manhattan College Parkway Bridge and on Van Cortlandt Park Equestrian Bridge, but it is doubtful these are original. In areas with severe curves, the jersey barriers have been painted with day-glow orange and white stripes. Similarly painted wooden roadwork barriers and plastic orange bollards with white reflector stripes have been erected to caution drivers approaching West 181st Street, where a portion of a retaining wall created a landslide when it fell onto the northbound parkway lanes in May 2005.

Signage

The HHP has directional and regulatory signs, all of which were added well after the parkway's construction. Directional signs include reflective green and white signs mounted on bridges identifying the street name of the overpass or mounted on the side of the parkway notifying drivers of upcoming exits. Regulatory signs include yellow and black signs mounted on bridges declaring the maximum vehicle height, black-on-white speed limit signs, and black-on-white "photography prohibited" signs located on the Henry Hudson Bridge. The bridge also has white-on-purple E-Z pass and black-on-white cash-only signs direct traffic to specific toll booths on the Manhattan side of the bridge. Yellow and black hazard signs caution drivers along sharp curves. Other signs include: small white-on-green street signs located on the medians; large white-on-blue signs signaling nearby hospitals; triangular red-on-white yield signs; black-on-white and white-on-green parkway notification signs; HHP beautification and adopt-a-highway signs; black-on-orange hazard signs; one large rectangular multi-hued painted wooden sign for Fort Tyron Park at the park's entrance; red-on-white restricted vehicle signs; and New York City Parks round signs of white-on-green with a maple leaf at the center.

33 For images, see "90th Street Southbound," neg. nos. 25631, 25632 and "125th Street Southbound," neg. no. 25629, in Metropolitan Transit Authority Bridges & Tunnels Archives, New York City (hereafter cited as MTA Archives).

Numerous billboards are located along the parkway from approximately West 125th Street to West 140th Street, cluttering the landscape. An electronic banner sign located on top of Fairway super market has red dot lettering. This sign is continuously in motion, with messages scrolling horizontally across its black display area. In March 2001, New York City passed a zoning amendment restricting sign size and preventing signs from being erected within 200 feet of highways and parks.³⁴

Surface

In 1937, the parkway was mostly constructed of reinforced concrete slabs. Drawings from 1937 note that 1" bituminous concrete on 4" of cinders paved the parkway, and stone blocks flanked the roadbed.³⁵ Over time, much of the surface has been replaced with poured concrete or asphalt. Throughout Riverside Park, the road surface consists of concrete. Much of the HHP roadway surface from above Riverside Park through the Bronx section, on the other hand, is asphalt. The asphalt portions located in Manhattan are warped and have long bumps at regular intervals.

Curbs

Curbs along the HHP are cast concrete, although they are missing in those sections of the parkway with jersey barriers. Many of the curbs in both boroughs have sustained damage and have begun to crumble into the roadway. The curbs help to define the borders of the roadway, but due to their deterioration and grass overgrowth, they are not visible in many places.

Drainage System

The drainage system for most of the parkway consists of grates located at regular intervals along the roadway. The grates are of cast metal and are directly adjacent to the medians. Some are cast with the company name: CAMPBELL FDY CO. HARRISON NJ.³⁶ Drawings specify four types of grates. The first, the "type 'A' offset type" was to be used next to bridge center piers, while the second, the "type 'B' offset type" was for

34 *Infinity Outdoor*, an outdoor advertising firm, sued the city over the amendment, but it was upheld, see *Infinity Outdoor v. City of New York*, 226 N.Y.L.J. 30 (October 18, 2001).

35 Henry Hudson Parkway Authority, "Henry Hudson Parkway Grading and Paving, Henry Hudson Bridge to 239th Street, Paving and Grading Details," September 16, 1937, Contract No. 18, Sheet No. 5 of 9, Drawing No. XE 110 1805, Olmsted Center.

36 See Paul S. Mankiewicz, Franco Montalto, and Julie A. Mankiewicz, "Stormwater Capture Parks Along the Henry Hudson Parkway: Developing Endor Garden as a Watershed Model" (The Gaia Institute, 2003) for a study of "an approximately half-mile span of parkland bounded by the Parkway lanes to the north, West 253rd Street to the south, Fieldston Road to the west, and Broadway to the east" (7). Their findings were that the runoff from the parkway entered the sewer line that runs under the parkway in this section. Furthermore, the topography of the area is such that severe erosion has occurred along the banks of the parkway, resulting in a deterioration of the soil and prevention of understory growth. The authors recommend "ecologically engineering terraced plantings and soil beds" along the parkway, which would increase "the biodiversity and ecological productivity of the park vegetation...while at the same time eliminating or greatly limiting stormwater discharge from this length of 253rd Street into combined sewers" (12).

use on the “outside edge of Parkway and on Service Drive opposite sidewalk” since it was a larger drain. These offset drains were 2’-1 3/4”. At locations where the curbs could not be offset, there was the “type ‘A’ pav’t type grate” to be used at intersections on the parkway and near bridge wing walls and retaining walls, and the “type ‘B’ pav’t type grate” to be used on the sidewalk side of service roads. The pavement grates were 2’-1 1/2”.³⁷ The catch basins for the drains were to be “constructed of brick with concrete footings at the option of the contractor.”³⁸ Drawings also show culverts with stone masonry headwalls.

EARLY HISTORY OF THE HENRY HUDSON PARKWAY CORRIDOR

Dozens of cars zoom or crawl through Riverside Park and down the West Side Highway and view the matchless, unspoiled Palisades. By comparison, the castled Rhine is a mere trickle between vine-clad slopes. I wonder sometimes whether our people, so obsessed with the seamy interior of Manhattan, deserve the Hudson. Robert Moses³⁹

The scenic Hudson River, which stretches 315 miles from the New York Harbor to the Adirondack Mountains, provides the backdrop for the Henry Hudson Parkway and has a long history of use.⁴⁰ To American Indians, such as the Rechgawawanc who lived in small riverside communities along the Hudson in what is today’s Upper Manhattan through the Bronx, the Hudson River was an important food source.⁴¹ The Dutch in 1609, particularly the Dutch East India Company, used the river as a transportation route.⁴² Sloops and then packets carried passengers and freight up and down the Hudson

37 “Henry Hudson Parkway Including Riverdale Avenue Bridges 1A, 2 & 2A,” Sheet 5, marked unofficially, February 7, 1935, Arsenal.

38 Henry Hudson Parkway Authority, “Henry Hudson Parkway Grading and Paving, Henry Hudson Bridge to 239th Street, Paving and Grading Details,” September 16, 1937, Contract No. 18, Sheet No. 5 of 9, Drawing No. XE 110 1805, Olmsted Center.

39 Quote printed in, Paul Goldberger, “Robert Moses, Master Builder, Is Dead at 92,” *New York Times*, July 30, 1981, A1.

40 The Hudson River has had many names, including *Shattemuc* (river that flows both ways), *Muheconneok* (from the waters that are never still), *Mahicantiuk* (flowing waters), and *Cohatatea* (river that flows from the mountains). The Dutch, on the other hand, called it the North River. Frank Chamberlain, *Hudson Tercentenary* (New York: Tercentenary Committee, 1909), 71; Stanne, 90; see also <http://www.native-languages.org/mohican.htm>. In order to facilitate understanding of the places mentioned, the contemporary names will be used in this report.

41 The Rechgawawanc people lived in Inwood and Riverdale and were members of the larger Weckquasgeek tribe. Reginald Pelham Bolton, *Inwood Hill Park on the Island of Manhattan* (New York: Dyckman Institute, 1937), 21; Mary E. Kane, *Yesterday in Riverdale and Spuyten Duyvil* (New York: Riverdale Neighborhood and Library Association, 1947), 1; Stanne, 92.

42 The Dutch founded the trading port of New Amsterdam at the mouth of the Hudson River and explored the river up into the northwestern reaches of New York State, guided by Englishman Henry Hudson. The Dutch East India Company hired Hudson to aid the company in its quest for passage through North

River.⁴³ In order to maintain its control over the river trade, the Dutch East India Company encouraged Dutch settlement along the river, but by 1664, the English had taken over New Amsterdam and renamed it “New York.” Soon after, they renamed the river the Hudson as a way to stake their claim on the waterway and secure their authority over the region.⁴⁴ Throughout the seventeenth and eighteenth centuries, the Hudson River corridor in New York City became increasingly populated. In northern Manhattan, land was divided into parcel strips of farmland that stretched from Broadway to the banks of the Hudson.⁴⁵ The completion of the Erie Canal in 1825 linked Lake Erie to the Hudson River and helped make New York City a commercial center while also opening up communication with the West.

By the nineteenth century, the Hudson River had become a tourist destination in addition to a transportation route. Robert Fulton’s steamship made its maiden journey up the Hudson in 1807, dramatically changing transportation by shortening the time of a trip from Albany to New York City. Fulton’s NORTH RIVER (or CLERMONT) took a fraction of the time taken by a sloop as it traveled 4 ½ miles per hour.⁴⁶ When other entrepreneurs, like Comm. Cornelius Vanderbilt, started their own competitor firms, the price of steamboat tickets dropped and their popularity increased. Docks were set up along the Hudson to take the many willing passengers on overnight and day trips, including the 129th Street Pier and Tubby Hook (which had been used by American Indians and later colonists as fishing grounds). By 1850, over one hundred steamboats worked the river, and guidebooks, like the 1859 *The River Hudson, Together with Descriptions and Illustrations of the City of New York*, provided descriptions of the area and points of interest to travelers.⁴⁷ The river continued to also serve as a major commercial corridor, with ships transporting materials like bricks, timber, and furs.

The establishment of the railroad in the mid-nineteenth century along the corridor only served to augment the transportation activities already taking place. The opening of the Hudson River Railroad in 1849, which ran between New York City and Albany, cut the travel time between the two cities to just four hours.⁴⁸ James Boorman established the Hudson River Railroad Company in 1847 and was able to overcome “fear of the strong Hudson steamboat competitions....and in four and one-half busy years financed, built,

America to India. When he and his shipmates failed to discover a northwest passage to India, they turned instead to finding productive ways to use the natural resources of New York State.

43 Allan Keller, *Life Along the Hudson* (Tarrytown, NY: Sleepy Hollow Restorations, 1976), 95-96.

44 Edwin G. Burrows and Mike Wallace, *Gotham: A History of New York City to 1898* (New York: Oxford University Press, 1999), 73; Stanne, 99-100.

45 Reginald Pelham Bolton, *Washington Heights—Its Eventful Past* (New York: Dyckman Institute, 1914), 2.

46 Burrows and Wallace, 342.

47 Stanne, 123; *The River Hudson, Together with Descriptions and Illustrations of the City of New York* (New York: Ross & Tousey, 1859). *The River Hudson* rather grandiosely compares the Hudson with the Rhine, in addition to pointing out such sites of interest as the cemetery where John James Audobon is buried, a lunatic asylum with “forty acres of land, divided into gardens and pleasure grounds” and Fort Washington, pp. 7-9.

48 Stanne, 126.

and put in operation, a complete double-track railroad between downtown New York and Albany.”⁴⁹ Much to the dismay of the landowners along the Hudson, the train cars and engines were loud, and malodorous fumes emanated from their smokestacks. The noise and smoke contributed to a decline in residential development along the rail lines until the final years of the century and created an unsightly barrier that made access to the waterfront difficult and made the shore unsuitable for recreation.⁵⁰

The Hudson River became increasingly settled in the mid-nineteenth century with residential developments. Elias Johnson, whose family opened the Johnson Foundry on the spit of land that jutted into Spuyten Duyvil Creek, bought Spuyten Duyvil hill in 1852 along with two other investors because of its close proximity to rail transportation. They laid out plots, but it was not until the late nineteenth and early twentieth centuries that Spuyten Duyvil developed.⁵¹ In 1874, the larger neighborhood of Riverdale was annexed to become a part of New York City rather than of Yonkers and Westchester County to the north. Edward Delafield bought land along the border of Riverdale and what would be Fieldston and had houses constructed there beginning in 1911.⁵² The Spuyten Duyvil Parkway, constructed in the 1880s after years of negotiation with local property owners, provided access to the area.⁵³

The construction of Riverside Park and Drive from West 72nd to 129th streets in an area that had been blighted by the construction of the Hudson River Railroad several decades earlier immediately stimulated developers like Clarence True to build row houses and small apartment blocks on speculation. The effect of increased residential development was “commerce at sea level, gentility on the bluffs above.”⁵⁴ Riverside Drive, however, never really attained the cachet of other addresses in New York City, although “it flirted

49 F.E. Williamson, President, New York Central System, “Progress,” in Harry Sweeny, Jr., ed., *West Side Improvement: Published on the Occasion of the Opening October 12th, 1937* (New York: The Moore Press, Inc.), 12.

50 Keller, 157; Arthur G. Adams, *The Hudson Through the Years* (New York: Fordham University Press, 1996), 205-208.

51 Kane, 28. Spuyten Duyvil Creek was another important transportation route. Running between the Harlem River to the east and the Hudson to the west, the creek divided Manhattan from the Bronx. Until the eighteenth century, it could only be crossed via a marshy area between the neighborhoods of Marble Hill and Kingsbridge termed the “Wading Place” by American Indians [Bolton, *Washington Heights*, 2]. In order to take advantage of increasing road traffic, Frederick Philipse (who purchased Riverdale and surrounding areas of the Bronx in 1672, and between 1653 and 1702 had acquired over 90,000 acres) installed the first toll road and bridge from Marble Hill to the mainland over Spuyten Duyvil Creek in 1693 [New York Landmarks Preservation Commission, ed., *Riverdale Historic District* (New York: The Commission, 1990), 7; Keller, 29]. Because travelers deemed the toll too expensive, they often bypassed the bridge and continued crossing at the Wading Place on foot or horseback. A free bridge was finally installed at this location in 1759 [Burrows and Wallace, 184].

52 Kane, 22.

53 The Spuyten Duyvil Parkway is mentioned in newspaper articles from the 1870s and appears on maps from 1885.

54 Elizabeth Cromley, “Riverside Park and Issues of Historic Preservation,” *Journal of the Society of Architectural Historians* 43, no. 3 (October 1984): 240.

briefly with high fashion in the early years of this century.” Instead, the drive became known “more as a place for the haute bourgeoisie than for the very rich.”⁵⁵ The introduction of the Broadway Interborough Rapid Transit (IRT) subway line in 1908 encouraged further construction of large apartment buildings along Riverside Drive. The new subway allowed New Yorkers to live uptown and commute to their jobs in the city’s commercial districts further downtown. Another aid to residential development was the opening of Lafayette Boulevard to traffic from West 158th Street in 1892. Set inland from the railroad, the road wound through the undulating contours of Audubon Park, Washington Heights, and the forests of what would become Fort Tryon and Inwood Hill parks to the northern tip of Manhattan.⁵⁶ There it linked with other roadways to allow traffic over the Kings Bridge to the mainland.⁵⁷ Lafayette Boulevard was later incorporated as part of the Riverside Drive extension. Finally, the Hudson-Fulton celebrations of 1909 marked the centennial of Robert Fulton’s historic steamboat ride and the tercentenary of Henry Hudson’s sail up the Hudson River, serving to reintroduce New Yorkers to the waterway. By the turn of the twentieth century, the Hudson River shores in New York City had become an established residential and transportation corridor.

55 Paul Goldberger, “Discovering the Pleasures of City’s Great Boulevard,” *New York Times*, October 3, 1980, C1.

56 Audubon Park was named after John James Audubon whose family had a country villa at West 158th Street from 1840-64.

57 Reginald Pelham Bolton, *Guide to Named Streets* (New York: Dyckman Institute, 1914), 7; Bolton, *Washington Heights—Its Eventful Past*, 110-111. Bolton notes that from West 177th through 181st streets, the drive was in an elevated position and had been constructed by private developers, most likely the Paterno family since they had constructed a “castle” at West 181st Street. Bolton noted that the “retaining wall twice collapsed after completion” in this location, which is interesting given that the retaining wall in that same location collapsed once again in May 2005.

PARKWAY AND PARKWAY PRECEDENTS⁵⁸

The origins of the parkway can be traced to New York landscape architects Frederick Law Olmsted and Calvert Vaux, who in the late 1860s coined the term “park-way,” to denote “tree-lined boulevards intended primarily for pleasure traffic traveling to and from suburban parks.”⁵⁹ The European boulevard provided the design precedent for the parkway, but landscape historian Timothy Davis argues that parkway developers also utilized “entrenched American beliefs in the virtues of rural life and the uplifting influence of nature” to create a pleasurable way to experience the landscape from an automobile. In fact the term parkway “evoked agreeable associations and encapsulated the underlying concept of a landscaped recreational road that functioned simultaneously as both park and way.”⁶⁰ With the rapid growth of urban areas like Boston and New York City, “Olmsted and his contemporaries...saw parkways as the most effective means of extending the benefits of nature throughout the urban fabric.”⁶¹

The Bronx River Parkway (see HAER No. NY-327), completed in 1925, was the forerunner of the Henry Hudson Parkway, indeed, of all parkways. Originally built as an incidental component of a larger scheme to reclaim the Bronx River from pollution and environmental degradation, the Bronx River Parkway “quickly set the standards for a new type of roadway development. The parkway demonstrated that modern motorways could combine beauty and efficiency. The careful coordination of landscape design and highway engineering produced a safe and efficient thoroughfare surrounded by a beautifully landscaped right-of-way offering informal recreational amenities.”⁶² Extending from the New York Botanical Gardens north to Kensico Dam at Valhalla in Westchester County for a total of 15.5 miles, the Bronx River Parkway pioneered the features that would come to be the “hallmarks of parkway design,” including: gentle grade changes and curves; removal of at-grade crossings; landscaped medians dividing the opposing lanes of traffic; and the use of structures designed to harmonize with the surrounding landscape. The parkway also featured rigid-frame bridges designed by

58 The Historic American Engineering Record (HAER) undertook a comprehensive survey of National Park Service roads and bridges, as well as other significant parkways and road system, beginning in 1988 with support from the Federal Highway Administration’s Federal Lands Highway Office. The collection of measured drawings, large format photography, and written reports can be searched and viewed online at the Library of Congress’ website, http://memory.loc.gov/ammem/collections/habs_haer/. Selected drawings can also be seen in Timothy Davis, Todd Croteau and Christopher Marston, eds., *America’s National Park Roads and Parkways: Drawings from the Historic American Engineering Record* (Baltimore: The Johns Hopkins University Press, 2004).

59 Dawn Duensing, “Bronx River Parkway Reservation,” HAER No. NY-327, Historic American Engineering Record, National Park Service, U.S. Department of Interior, 14-15. For more information, see Timothy Davis, “Mount Vernon Memorial Highway and the Evolution of the American Parkway” (Ph.D. diss. University of Texas at Austin, 1997).

60 Timothy Davis, “‘A Pleasant Illusion of Unspoiled Countryside’: The American Parkway and the Problematics of an Institutionalized Vernacular,” in *Constructing Image, Identity and Place, Perspectives in Vernacular Architecture IX*, ed. Alison K. Hoagland and Kenneth A. Briesch (Knoxville: The University of Tennessee Press, 2003), 230. For more discussion of parkway precedents, see also Davis, “Mount Vernon Memorial Highway.”

61 Davis, “A Pleasant Illusion,” 232.

62 Duensing, 5.

Arthur Hayden that revolutionized bridge building (see Construction section of this report for more information).⁶³

The stories of the Bronx River Parkway and the Henry Hudson Parkway share similarities. The Bronx Parkway Commission's mission was to reclaim the polluted Bronx River, with its secondary goal being the construction of a parkway along a cleaned-up river.⁶⁴ While Moses undoubtedly saw the importance of constructing a parkway to connect with Westchester County and beyond, he also wanted to showcase the beauty of the Hudson and improve the deteriorating Riverside Park. In addition, the HHP became a route linking five major city parks (although that was somewhat by default since Moses reportedly located the parkway through Fort Tryon and Inwood Hill parks to reduce land acquisition costs).⁶⁵ As with the Bronx River Parkway, even though the Henry Hudson Parkway was not intended to be a major traffic route, commuters quickly began using it.⁶⁶

In contrast to the HHP, the suburban Bronx River Parkway was not intended to primarily highlight recreational areas. Hermann Merkel, landscape architect of the Bronx River Parkway project, explicitly stated that recreation areas were of secondary importance. The 1916 *Report of the Bronx Parkway Commission* noted, "our first duty [was] to provide a beautiful Parkway, rather than a great number of local parks of diversified character."⁶⁷ The Bronx River Parkway Reservation did have some recreational amenities, like bathing areas, a trail, winter skating, and picnicking, but the recreation areas were kept visually separate from the landscape surrounding the parkway.

The Henry Hudson Parkway, on the other hand, was intrinsically linked to the recreational opportunities of the major city parks of Riverside Park, Fort Washington, Fort Tryon, Inwood Hill, and Van Cortlandt. The sports fields and playgrounds of Riverside Park were visible to motorists on the parkway, and park users enjoying the facilities could see the parkway. The two disparate projects (park and parkway) were unified through the usage of rustic building materials: broken range work masonry, granite accents in voussoirs, copings, and quoins, and the use of arches as an architectural motif. Beyond Riverside Park, the HHP provided access to recreational opportunities in northern Manhattan and the Bronx. The creation of parks and roads in New York City was a primary concern for Moses, and the HHP is a prime example of his philosophy. As Cleveland Rodgers points out in his 1952 work on Moses, "the city parkways are really ribbon parks, with footpaths, bicycle paths, waterfront promenades, and passive and active recreational areas bordering them... This merging of park and parkways is typical Moses technique, which aims at integrating related things."⁶⁸

63 Duensing, 62-63.

64 Duensing, 6.

65 Mankiewicz, et al., "Stormwater Capture Parks," 6.

66 Duensing, 102, 115.

67 Duensing, 56, Merkel quote from Bronx Parkway Commission, *Report of the Bronx Parkway Commission* (New York: The Trow Press, 1916), in Westchester County Archives, Series 95.

68 Rodgers, *Robert Moses: Builder for Democracy*, 87.

THE HENRY HUDSON PARKWAY IN THE REGION

Robert Moses was able to manipulate the regional plan framework to construct a series of parkways connecting New York City and New York state parks with one another.⁶⁹

Together these parkways created a massive limited use transportation network, combining links to New York City and State parklands with much needed roadways to and from the city. The Henry Hudson Parkway was one among many parkways constructed to create a regional network. In Westchester, parkways included: Saw Mill River (built by the Westchester County Parks Commission, 1925-54), Hutchinson River (whose Westchester County portion was built by the Westchester County Parks Commission, 1924-41), and Sprain Brook (1958-80). The Hutchinson River Parkway further connects the New York City and State parks system to Connecticut's Merritt Parkway (see HAER No. CT-63), while the Sprain Brook and Saw Mill River parkways allow traffic to travel upstate via connections to the Taconic State Parkway (see HAER No. NY-316) and Bronx River Parkway and extensions. Within the city limits, the Interborough Parkway in Brooklyn and Queens and Grand Central Parkway facilitated access to Long Island and its corresponding network of parkways and shoreline parklands.⁷⁰

The 1929 *Regional Plan of New York and Its Environs* was a landmark document in American planning history because it provided a comprehensive plan of development for New York City. The Russell Sage Foundation of New York City, a general purpose foundation established in 1907, funded the study. The plan served as a guide for Moses' road construction plans, because it "superimposed the loop diagram on a map of the metropolitan region, then adapted the diagram--presumably allowing for existing conditions and topography--to create a feasible highway plan." The map showed "most of the expressways and parkways that Moses or the Port Authority would build in New York beginning in the 1930s" such as the Cross-Bronx, Trans-Manhattan, Brooklyn-Queens, West Side Highway, Long Island Expressway, New England Thruway, and the HHP. By 1941, many of the recommendations of the *Regional Plan* had been followed, "mostly with automobile-only parkways." In January 1941, the New York City Planning Commission "noted that the city had a long way to go before it could claim a unified, integrated system that would move both passenger and commercial vehicles. This system was needed, the Commission said, because of New York's chronic traffic problems, which grew out of a four-fold increase in city motor vehicle registrations between 1920 and 1939, to a level of nearly one million."⁷¹

69 Matthew Dalbey, *Regional Visionaries and Metropolitan Boosters: Decentralization, Regional Planning, and Parkways During the Interwar Years* (Norwell, MA: Kluwer Academic Publishers, 2002), 25.

70 See Robert A. Caro, *The Power Broker: Robert Moses and the Fall of New York* (New York: Vintage Books, 1975), for more on Moses' involvement in these and other parkway projects.

71 Michael Caratzas, "Cross-Bronx, Trans-Manhattan: Preserving a Significant Urban Expressway and its Megastructure," (MA thesis, Columbia University, May 2002), 10, 11. See also, Committee on the Regional Plan of New York and Its Environs, *Regional Plan of New York and Its Environs, Volume 1: The Graphic Regional Plan* (Philadelphia: Fell Co., 1929).

As Michael Caratzas points out in his Masters Thesis on the Cross-Bronx Expressway, the U.S. Bureau of Public Roads in *Toll Roads and Free Roads* of 1939 praised the West Side Highway and the HHP “together with their connecting parkways in Westchester County, New York, and the Merritt Parkway in Connecticut” as “outstanding among the few instances that can be cited, both for their completeness and the vigor of their execution.”⁷² The report further noted the difficulty of road construction in the urban environment, stating “city administrators have been deterred...by what appear to be literally stupendous difficulties and expense involved—with difficulties and expense partly of an engineering nature, but first and usually in much the greater measure generated by the acquisition of right-of-way and the damage to, or obliteration of, private property,” illustrating even further Moses’ remarkable accomplishment in pushing through the construction of the parkway.⁷³ Plans were important for guiding the development of the metropolis, but strong figures in government were necessary to carry through the plans. Robert Moses was just such a figure to take on the challenge.

ENVISIONING THE HENRY HUDSON PARKWAY

Robert Moses

In 1914, Robert Moses (1888-1981) and some friends were on a ferry going across the Hudson River to New Jersey to enjoy a picnic.

As the ferry pulled out into the river, Moses leaned on the rail, watching Manhattan spread out behind the boat. Miss Perkins [Frances Perkins, who would later become U.S. Secretary of Labor] happened to be standing beside him and suddenly she heard Moses exclaim, “Isn’t this a temptation to you? Couldn’t this waterfront be the most beautiful thing in the world?”....Staring back at the bleak mud flats covered by a haze of smoke from the railroad engines, she heard Moses paint a picture of what the scene *could* be like on a Sunday—the ugly tracks completely hidden by the great highway, cars traveling slowly along it, their occupants enjoying the view, and along the highway stretching green parks filled with strollers, tennis players and families on bicycles. There would be sailboats on the river and motor yachts tied up in gracefully curving basins. And the thing that astonished her most, Miss Perkins was to recall, was that

72 U.S. Bureau of Public Roads, *Toll Roads and Free Roads. Message from the President of the United States transmitting a letter from the Secretary of Agriculture, concurred in by the Secretary of War, enclosing a Report of the Bureau of Public Roads, United States Department of Agriculture, on the feasibility of a system of transcontinental toll roads and a master plan for free highway development* (Washington, DC: U.S. Government Printing Office, 1939), 93.

73 *Toll Roads*, 94.

Bob Moses had the exact location of tennis courts and boat basins quite definitely in mind.⁷⁴

By 1937, Robert Moses had realized his dream. The HHP was only one of many Moses projects, but it may have been the one closest to his heart. It was a synthesis of nature and technology that today remains a testament to Moses' ability to transform his metropolis. He created not only a parkway, but also a "ribbon park" offering both passive and active recreational opportunities along with a well-built road.⁷⁵

Robert Moses began his career in the Bureau of Municipal Research, a private think tank dedicated to municipal government reform. His focus changed when he met and became a close associate of Alfred E. Smith, who later became governor of New York. It was during Governor Smith's tenure that Moses acquired his lifelong interest in parks, public works, and highways, and refined his understanding of the automobile as the crucial element in regional development. In Moses' mind, a parkway was not merely a road through pretty scenery; it was also a road to spiritual and moral uplift obtainable by interaction with nature. Thus, not only was the automobile essential for the development of New York City as a whole, but also it was critical for the automobile-owning city dweller's quality of life.⁷⁶ As noted by Cleveland Rodgers, "Around New York City he has done more for motorists than any man since Henry Ford, by mixing flowering shrubs, trees and grass with stone and concrete to create ribbon parks and by keeping metal and human flesh and blood unmixed where automobiles and trains formerly collided at grade crossings."⁷⁷

Moses had no formal training as a planner, architect, or engineer, but he gathered around him a coterie of talented "men of action," professionals such as Gilmore D. Clarke, Aymar Embury II, Jack Madigan, and Richard V. Hyland, to help make his vision a reality. Moses also claimed to not be a politician, but beginning in 1924, he started to amass a power base that was to last for the next forty-four years, and it was this power that made it possible for him to push his many projects through to completion. At the time that he began construction of the Henry Hudson Parkway and the West Side Improvement project, Robert Moses was the president of the Long Island State Park Commission, the commissioner of the newly unified City Parks Department, the head of the Triborough Bridge Authority, and the sole member of the Henry Hudson Parkway Authority. How Robert Moses went about transforming his domain is an example of an unprecedented wielding of power to enforce a belief in technology as a progressive force for social change.

74 Robert A. Caro, *The Power Broker: Robert Moses and the Fall of New York* (New York: Vintage Books, 1975), 67. *The Power Broker*, while the most comprehensive and detailed investigation into Robert Moses, is a reflection of the 1970s backlash of planners and politicians about earlier city planning practices.

75 Rodgers, *Robert Moses: Builder for Democracy*, 87.

76 Matthew Gandy, "Technological Modernism and the Urban Parkway," Chapter 3 in *Concrete and Clay: Reworking Nature in New York City* (Cambridge, MA: The MIT Press, 2002), 136.

77 Rodgers, *Robert Moses: Builder for Democracy*, xvii.

Financing the Parkway

Dreams come at a price, and Robert Moses needed \$109 million to make his dream a reality. The financing of the Henry Hudson Parkway was a brilliant illustration of Robert Moses' particular brand of genius--his ability to "get things done."

Moses found \$13.5 million in New York State's Grade-Crossing Elimination Fund. "Grade crossings" traditionally referred to a highway elevation over a railroad crossing at a single point. In Moses' mind, it was enough that his project involved both a "highway" and a "railroad." He found another \$4 million by hauling away excavations from New York Central Railroad's works below West 72nd Street to use as fill in Riverside Park. His liberal interpretation of the 79th Street Boat Basin as part of a "grade elimination structure" opened up another \$5.1 million, this time from the Public Works Administration. For the section of the parkway between the West Side Highway and the George Washington Bridge, Moses tapped into federal aid available for projects involving highways, housing, railroads, rivers and harbors; this fund yielded \$12 million. He cut plans for improvements and amenities in the northern 4.7 miles of Riverside Park (from West 110th Street northward, including Harlem) and saved \$29 million in construction costs. He received \$30 million from the Civil Works Administration (CWA) by calling the six-lane highway a "park access road" in its route through Riverside Park. Then, by running this "park access road" through city-owned Fort Tryon, Inwood Hill, and Van Cortlandt parks, Moses not only saved on land acquisition and right-of-way expenses, but also he was able to utilize free CWA labor. Finally, Moses met the last \$10 million required by exploiting the use of public authorities.⁷⁸

Public authorities are autonomous organizations created by legislation and are not limited by tax revenues. Authorities raise money for public works projects by issuing bonds. The revenue generated by the works, for example by tolls, is then used to retire the bonds and the authority, with the city taking over maintenance and operation of the works. Authorities were of course in existence before the Moses era, but no one had used their power quite so extensively or creatively. Moses' innovation was to keep the authority running even after the bonds had been paid off so that the money raised could be used to finance other projects.⁷⁹

Robert Moses helped write the legislation that set up authorities for his projects, including the Jones Beach State Park Authority, the Marine Parkway Authority, and the Triborough Bridge Authority. He was also responsible for the Henry Hudson Parkway Authority, of which he became the sole member in 1934. In the midst of the Depression, Moses managed to convince the bankers, who were all quite skittish about bonds, that revenue generated from tolls on the soon to-be-built Henry Hudson Bridge would be more than adequate to cover maintenance, interest payment, and amortization fees--

⁷⁸ Caro, *The Power Broker*, 527-539.

⁷⁹ For assessments of Moses' use of authorities, see Benjamin Miller, "Parks and Parkways," Chapter 7 in *Fat of the Land: Garbage in New York, The Last Two Hundred Years* (New York: Four Walls Eight Windows, 2000), and Paul Goldberger, "Robert Moses, Master Builder, is Dead at 92," *New York Times*, July 30, 1981, A1. See also Caro, *The Power Broker*, 15-19, 615-636.

especially if the bridge was designed to be expandable to two decks to take care of what he was sure would be increased traffic over the route.

Over the years, Moses helped create other authorities, maintaining complete control over the projects as well as over the revenue. The public seemed not to have cared that Moses was the “sole member” of the Henry Hudson Parkway Authority. In fact, a 1935 *New York Times* article was quite laudatory of his benign dictatorship. The reporter listed Moses’ various positions, the dollar amounts of his projects, and noted “the Henry Hudson and Marine Parkway Authorities were created by the legislature with Mr. Moses as sole head of each.” The writer approved of the arrangement, arguing that power in one person’s hands meant that Moses “can see to it that no project progresses at the expense of any other...[He] is also in a position to view the plans of one project in relation to those of the others and to the improvement of the region as a whole.”⁸⁰ As Moses reminisced in 1970, “It was charged that acting in several capacities confused seven different sources of funding and that my left hand did not always know what my right was doing.”⁸¹ Regardless of his techniques, Moses was adept at obtaining the funding he needed, and this ability allowed the West Side Improvement plans that had been swirling through New York government offices for years to finally be completed.

DEFINING THE PARKWAY

Expectations

Robert Moses had a vision of the parkway, but he also had “the gumption to translate plan into reality.”⁸² Moses, in fact, was quoted as saying: “what New York needs today is not vision, with which we have always been plentifully endowed in the past, but elbow grease.”⁸³ The Henry Hudson Parkway was to be an aesthetically pleasing blend of the natural and the engineered meant to enrich the urban New Yorker’s life by improving both the recreational opportunities available to those on the West Side and the Bronx as well as creating a route along the Hudson that connected to Westchester County and the rest of New York State.

Ideally, the parkway would have remained a recreational route, but Moses anticipated the impact of the automobile on the city. He stated in an article on automobiles in the 1940s:

It is finally dawning upon both dreamers and rural-minded officials that most of our travel originates and ends in cities, and that when we bypass the cities we simply duck around the entire problem and thrust it upon crowded communities which cannot meet it without help. Standards for ordinary streets, country highways, and secondary roads are fairly well

80 A.D. Britton, “Moses’s Many Projects Are All Tied Together,” *New York Times*, February 10, 1935.

81 Robert Moses, *Public Works: A Dangerous Trade* (New York: McGraw-Hill Book Co., 1970), 185.

82 Henry Hudson Parkway Authority, *Opening of the Henry Hudson Parkway*, 7.

83 “The New Parkways,” *New York Times*, December 12, 1936, 18.

established. It is the congested urban and suburban main artery that requires our clearest thinking and best judgments.⁸⁴

The HHP would be one such artery for use by city residents, and one that would be sorely needed as evidence by 1925 automobile census figures, which showed that of the 21,360,779 motor vehicles in use in the world, 17,726,507 were in the United States, and of that number, 1,412,879 were in New York state, making New York numerically the most motorized state in the country.⁸⁵ The Henry Hudson Parkway would be used to relieve congestion on the west side of Manhattan and to provide a direct route from downtown all the way north to the Bronx. Officials also believed that the West Side improvements would bring economic benefits through more employment opportunities, greater access to businesses, and increased real estate values.

Scope of Work

The scope of the plan was enormous. The Henry Hudson Parkway and the Henry Hudson Bridge were part of the ambitious project known as the “West Side Improvement.” The overall design included completing the 5-mile elevated express highway (known as the West Side Highway, begun in 1929) from the Battery to West 72nd Street, extending that highway (then called the Henry Hudson Parkway) from West 72nd Street 6.5 miles north to the upper end of Manhattan, building a bridge (the long-awaited Henry Hudson Bridge) to carry the parkway across the Harlem River into the Bronx, and ultimately linking the HHP at the Westchester border to the Saw Mill River Parkway, a section of which had been completed in 1929. Along the way, the parkway would run through Riverside Park. Moses stated in his 1970 memoir *Public Works: A Dangerous Trade*, “the parkway along the Hudson in Riverside Park on the west side of Manhattan is an example of combined planning of arterial transportation, recreational facilities and waterfront reclamation. The Henry Hudson Parkway and the West Side Improvement solved one of our oldest, most complicated, most debated and most pressing city planning problems.”⁸⁶ The Riverside Park reclamation required widening the land westward by dumping fill, covering the New York Central Railroad tracks and constructing the park promenade on top, completing the landscaping of new as well as existing park acreage, and building a chain of playgrounds and recreational areas along its length. The parkway from West 72nd to 125th streets would have entrance and exit ramps at West 72nd Street, a grade crossing elimination structure at West 79th Street as well as exit ramps, an access road to Riverside Drive at West 95th Street, an access road to West 96th Street and a grade crossing elimination structure, and connections to St. Clair Place and a viaduct.⁸⁷ In the Bronx, bridges would be constructed at Spuyten Duyvil Parkway and Riverdale Avenue, West 246th Street, Delafield Avenue at the point

84 Robert Moses, “Tomorrow’s Cars and Roads,” Reprinted by permission of Liberty Magazine, Inc. by the Triborough Bridge Authority, 194?, 3.

85 “Automobile Census Shows World Has 21,360,779 Cars,” *New York Times*, March 8, 1925, XX12.

86 Moses, *Public Works*, 183.

87 “Riverside Plans Put Before City,” *New York Times*, January 11, 1936, 17.

where the parkway turned east from Riverdale Avenue, Fieldston Road, Broadway, in addition to four bridges at Van Cortlandt Park.⁸⁸

Background of the Project

Robert Moses' plan for the parkway was intimately tied to his dream of rehabilitating Riverside Park; he had been thinking about it since his days at the Training School for Public Works in 1913. Back then, the track bed of the New York Central Railroad ran exposed through the park, and the landfill on which it had been built was rapidly eroding from below. The location of the railroad tracks along the waterfront encouraged an industrial use that was certainly not conducive to creating a pleasant atmosphere in which to enjoy the park and river views. The park was home to derelict shanty towns, Sanitation Department garbage dumps, and 2,000,000 yards of excavation fill deposited from the Catskill Aqueduct excavation of 1909-11.⁸⁹ The Department of Street Cleaning added further unattractive mounds. Later, the Department of Sanitation used West 79th and 96th streets as loading piers for refuse destined for the open sea, while the Department of Docks stored long timber piles in shallow basins along the shore. Floating bathhouses secured to piles at various locations along the riverfront and sand lot baseball on leveled portions of the dumps, access to which was provided by two pedestrian footbridges at West 151st and 155th streets over the railroad tracks, provided the only public usage of the area. As Moses described it, beyond the railroad was a "hodgepodge of dumps and squatters" with the exposed railroad tracks consisting of "miles of smelling cattle trains" being a "prominent feature from the drive."⁹⁰ It had not always been such a sad sight.

Riverside Park, along with Central and Prospect parks, was the product of the mid-nineteenth century parks movement that gained momentum as a reaction to intensive industrialization and urbanization. These parks were designed to not only complement, but also to enhance nature; they were places that promoted civic health by encouraging repose, reflection and gentle recreation for all levels of society. The success of Central Park and subsequent enhancement of neighboring real estate values prompted parks Commissioner Andrew H. Green to introduce a bill to create Riverside Park on the precipice above the Hudson River, between West 72nd and 129th streets. At the end of the nineteenth century, the area now encompassed by the park and drive was home to eighteenth century rural estates situated on the ridge overlooking the Hudson while on the

88 "3,000,000 Paid in for New Highway," *New York Times*, April 20, 1935, 3.

89 "Before and After, 1637-1937," in *West Side Improvement*, 18. For photographs, see "Landfill Operation, 95th St, Top of hill," photo by Alajos Schuszler, neg. no. 3011/5732, 6/1/35, Arsenal; "Squatter Shack, Texas Leasehold Estate," photo by Alajos Schuszler, neg. no. 3022, 4/34, Arsenal; "Riverside Park, N, 72nd Street," Percy Loomis Sperr, Photographer, 1930, in *Photographic Views of New York City, 1870s-1970s*, Humanities and Social Sciences Library, call nos. 0970-B6, 0970-B7, dig. id. 722870F, NYPL Digital Gallery; "Riverside Park, N, 75th Street," Percy Loomis Sperr, Photographer, 1934, in *Photographic Views of New York City, 1870s-1970s*, Humanities and Social Sciences Library, call nos. 0970-C1, 0970-C2, 0970-C3, dig. id. 722872F, NYPL Digital Gallery.

90 Moses, *Public Works*, 185.

waterfront below ran the trains.⁹¹ As New York City rapidly expanded in the mid-nineteenth century, population pressures pushed the existing housing market to capacity downtown. In the 1860s, “responding to the demands of an expanding city, and grounded in an aesthetic of nature, parks planners and real estate interests developed the first plans for the Riverside district,” Central Park Commissioner William Martin suggested a park and drive as a way to encourage settlement.⁹² By 1866, the city had taken the step of buying land for a straight drive on the ridge and the hill sloping to the Hudson for a park.⁹³ An 1867 plan called for a straight avenue 100’ wide on top of the rocky bluffs; this would have required extensive excavating, grading and filling, as well as constructing a very large and expensive retaining wall that would have limited pedestrian access to the park and the river.

In 1873, with the success of Central Park behind them, Frederick Law Olmsted and Calvert Vaux drew up an alternative plan that solved the challenging topography problem of the proposed park, which had a very steep slope down to the railroad tracks and Hudson River. Olmsted’s plan was for a winding 3-mile drive terminating in a circle at the Claremont Inn, where Grant’s tomb would later be located.⁹⁴ Olmsted and Vaux proposed merging the land for the drive with the land for the park, and designed the drive (then called Riverside Avenue) as a curving road that took advantage of the topography and the spectacular vistas. The park would retain its existing vegetation and also have new landscaping to provide a “natural” backdrop for the pleasure drive.⁹⁵

The city built the park and drive more or less according to the Olmsted-Vaux plan between 1876 and 1900 up to West 135th Street, and portions of Riverside Drive opened to the public in 1880. By 1902, the viaduct connecting the drive at West 96th Street had been completed.⁹⁶ The integration of Riverside Drive into the existing landscape was lauded.

The road itself [Riverside Drive]—a cluster of ample ways for pleasure riding, driving, and walking, separated by strips of turf from which stately

91 Cromley, 240. This article was written in response to the 1980 designation of Riverside Park and Drive from West 72nd to 129th street as a Scenic Landmark by the New York Landmarks Preservation Commission, which Cromley found problematic since the case for its significance was based upon Olmsted’s involvement. Cromley argues that her research shows “only a small part of the park as it stands today was actually designed by Olmsted, and that Riverside Park was rather the result of ad hoc decisions and compromises over several decades.” She views the park and drive as resulting from three periods of development: Olmsted’s plans as seen in the “layout of Riverside Drive on the high ground above the Hudson and in the parkland immediately adjacent to the Drive;” the City Beautiful movement with the addition of the monuments and memorials; and the 1930s view of parks “as active recreation spaces” (see p. 238). See also, Larry E. Gobrecht, “Riverside Park and Drive,” National Register of Historic Places Inventory, Nomination Form, 1983.

92 Cromley, 240.

93 Cromley, 240.

94 Cromley, 240.

95 Gobrecht, “Riverside Park and Drive,” and “Riverside Park Evolution and Restoration,” unpaginated.

96 “Riverside Park Evolution and Restoration,” unpaginated.

trees are to rise, and extending for three miles—would have a dignity of its own wherever it might lead through the city. But its position overlooking the broad Hudson gives it an added importance and an individual character which are not repeated nor paralleled in any of the famous avenues of the world.⁹⁷

Riverside Drive, “rising and falling at easy grades, curving about bolder projections, and everywhere adapting its course so graciously to the contour of the land, that it does not look to have been laboriously ‘laid out,’ but to have developed rather as a part of the natural order of things” was a premiere feature of the park as it “delights the eye and kindles the imagination.”⁹⁸ Riverside Drive had concrete curbs with four courses of masonry blocks alongside. It also had cast iron light standards that curved like a shepherd’s crook and had hanging lanterns. Oriental plane trees planted along the drive enhanced the landscape.⁹⁹ Postcards of Riverside Drive at West 145th Street show a wide drive with light standards and young trees planted along the edges and the median, and pedestrians using paths on either side of the drive. Overlooks gave pedestrians a chance to gaze at the Hudson as well as the less appealing railroad tracks.¹⁰⁰

Riverside Drive and Park were catalysts for more intensive development on the adjoining land. Shortly after the opening of Riverside Drive in the 1880s, the construction of single-family houses and apartment buildings began. As noted by William Stiles in an article in *The Century*, the beauty of Riverside Park and Drive “will be plainly squandered if it is not occupied by a line of villas” and “not until the expanding city has brought a large population within easy reach of the work can it completely fulfill its purpose as a grand promenade, where people in great numbers come together for that stimulating recreation which forms so important a feature in the social life of Old World cities.”¹⁰¹

The city had hoped that the new Riverside Park and Drive would encourage real estate development in the area and attract the wealthy families then congregated along Fifth Avenue. Some of the upper class did build mansions along Riverside Drive: steel magnate Charles Schwab had his block-long marble mansion between West 73rd and 74th

97 William Stiles, “Riverside Park,” *The Century: A Popular Quarterly* 30, no. 1 (May 1885): 914.

98 Stiles, 914.

99 See “Oriental Plane Trees, Planted 1910, Riverside Drive, 135th to 145th Street (Looking South to 135th Street),” in City of New York, Department of Parks, Annual Report, 1910, p. 33, M-71, neg. 588 and “Oriental Plane Trees Planted 1910, Riverside Drive, 135th Street to 145th Street (Looking North to 145th Street),” in City of New York, Department of Parks, Annual Report, 1910, p. 35, M-71, neg. 589, both Olmsted Center.

100 There are many images of the park and drive, see for example, “Riverside Drive, North from 145th Street, New York,” Box 11B, Museum of City of New York, Postcards; “Riverside Drive, N, W 72nd Street,” 1924?, Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call no. 0964-A2, dig. id. 722695F, NYPL Digital Gallery; “Riverside Drive, N, 90th St,” Ewing Galloway, Photographer, nd, Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call no. 0965-C2, dig. id. 722733F, NYPL Digital Gallery.

101 Stiles, 917.

streets (1906, demolished in 1948); Isaac L. Rice, a wealthy lawyer and industrial pioneer in electrical storage batteries built his home at West 89th Street (1900) across from the Soldiers and Sailors Monument; and Morris Schinasi, who made his fortune in Turkish tobacco, had Carnegie Hall architect William Tuthill design his French Renaissance mansion at West 108th Street (1909). Riverside Drive became the bastion of the middle and upper middle class, who were attracted to the spacious apartments along the drive. Developers constructed luxury high-rise apartments specifically for the well-to-do: the Beaux-Arts style Chatsworth (1902-06) at West 72nd Street, the Clarendon (1907) at West 86th Street (William Randolph Hearst and his art collection occupied the top three floors of this building for many years), the Cliff Dwellers' Apartments (1914) at West 96th Street, and The Colosseum (1910) at West 116th Street. Not only did the apartments have views of the park and the Hudson River, but also they were very large. For example, at the Colosseum, each apartment occupied an entire floor.¹⁰²

Riverside Park, as conceived by Olmsted, "was laid out with paths and plantings in the English Gardening style. The Park was designed to enhance the natural beauty of the setting and to provide picturesque sequences of views from the paths designed for leisurely strolling...Separated by the rustic retaining wall and great level changes, the park became a refuge from the City...The railroad, however, continued to separate the park from the River and began to destroy this illusion."¹⁰³ Inside the park, winding paths afforded vistas of the Hudson River and preserved rock outcroppings dotted the landscape.¹⁰⁴ At the turn of the century, Riverside Park was still somewhat bare until the newly planted landscape grew. The man made features of the park were designed to appear rustic, such as fence posts made of concrete designed to look like wood with chain railings.¹⁰⁵ Riverside Park was not simply an alternative to Central Park, but an important site for residents of the West Side.

Olmsted was unhappy that his successors added recreational areas (he thought the park was too narrow for them) and planted trees on the slopes (he feared that at maturity, the trees would block the view from the drive), but the real detraction from the park was the railroad. On the shore of the Hudson was an unsightly landscape consisting of all manner of railroad-related structures, the tracks and boats, with a retaining wall holding back the slope from Riverside Drive to the tracks, necessary because of the deep cut in which the tracks were located and the resulting difference in grade level.¹⁰⁶ The railroad tracks

102 For a photograph of the Schwab residence see, "On the Hudson—Residence of C.M. Schwab Esq. Chapel and Rear Façade," Maurice Hebert, Photographer, in Mid-Manhattan Picture Collection, New York City, call no. PC NEW YC-Hou, dig. id. 805309, NYPL Digital Collection.

103 "Riverside Park Evolution and Restoration," unpaginated.

104 "Riverside Park, Characteristic Views, Looking South," from the City of New York, Department of Parks, Report for the Year 1902, following p. 52, M-71, neg. 251, Olmsted Center.

105 "Riverside Park, At Seventy-Second Street: Showing New Concrete Rustic Fence-posts Designed and Made in Department," from Annual Report of the Department of Parks of the City of New York for the Year 1908, p. 111, M-71, neg. 510, Olmsted Center.

106 "Riverside Drive, North from 135th Street Toward Fort George," postcard, from private collection of John Reddick.

were a barrier separating the park from the river. Over time, more and more railroad-related structures littered the landscape, contributing to the park's deterioration.

The issue of the railroad stymied further improvements to the West Side. Very few people paid attention to the undeveloped portions west of the tracks since the primary use of the land as a dump made it undesirable. While Riverside Drive may have "become an exclusive, world-famous residential street," the "noisy freight trains, with smoking locomotives and sometimes odorous live freight passing along the river bank only a few hundred feet away, were disturbing." The problem lay in "how to get the railroad out of the way, off the streets, out of sight, pay the bill...*and still have the railroad*, the only all-freight route onto Manhattan Island."¹⁰⁷ In 1891, the Board of Estimate and Apportionment appointed a special commission to study how to improve Riverside Park. The commission recommended building a sea wall from West 72nd to 96th streets. They also suggested including a terrace with a "fast road," a promenade, paths, landscaping, and hiding the railroad tracks.¹⁰⁸ In 1894, the state legislature purchased all the land west of the tracks for parkland, but this did not prevent further railroad expansion. In contrast to the stateliness of Riverside Drive, the Hudson River Railroad, which merged with the New York Central in 1869, expanded to six tracks along the riverfront in 1895 and continued building ancillary structures necessary to its operation, despite the city's purchase of the land between the tracks and the river. Residents formed the West End Association in the 1880s, as the railroad operations superseded the pleasures of the park.¹⁰⁹

Residents and officials made many proposals to save the park, with the common goal of making the railroad tracks less intrusive. For example, former Parks Commissioner (and Tammany boss) Peter B. Sweeney's 1890 plan called for a seawall between West 72nd and 96th streets, with land built up next to the railroad tracks so that they ran in a deep cut. There would be a road next to the river devoted to commercial horse-drawn traffic; a terrace above this road would contain an 80' parkway for "unrestricted fast driving" and a 50' "grand equestrian promenade." The rest of the terrace, 100' wide, would be carefully landscaped to screen the railroad from view.¹¹⁰

Despite the contentious debate over the railroad, Riverside Drive was still lengthened. Acquisition of the land for the extension of Riverside Drive from West 135th to 158th streets occurred in 1899, 1903 and 1931.¹¹¹ Francis Stuart Williamson designed and built the Riverside Drive viaduct to bridge Manhattan Valley at West 125th Street in 1902.¹¹²

107 F.E. Williamson, President, New York Central System, "Progress," in *West Side Improvement*, 14.

108 The commission included William C. Whitney at its head and Leopold Eidlitz as engineer. Joseph J. O'Donoghue wrote the report. Moses, "A Great Waterfront Reclamation and a New Parkway," in *West Side Improvement*, 2.

109 Cromley, 244-245.

110 Robert Moses, "A Great Waterfront Reclamation and a New Parkway," in *West Side Improvement*, 2. Also see Cromley, 238-49.

111 "Before and After 1637-1937," in *West Side Improvement*, 17.

112 "Riverside Park Evolution and Restoration," unpaginated.

The viaduct from West 125th to 135th streets was a graceful arched steel girder structure with slender columns supporting the roadway. St. Clair Place and Twelfth Avenue (nicknamed “Death Avenue” for the perilous at grade railroad crossing located there) below the viaduct was a scene of chaos as pedestrians, horses, the railroad and commerce mingled. Above, Riverside Drive was a pleasant scene with wide sidewalks for promenaders, lit by decorative light standards with globe fixtures. A decorative metal balustrade edged the viaduct.¹¹³

Manhattan Borough President Cantor presented plans in 1902 to add to Riverside Drive by connecting it “with Boulevard Lafayette, which extends from One Hundred and Fifty-Eighth Street to the heights of Inwood, and is without a parallel as a drive in any city of the world.”¹¹⁴ The new route would be laid out as follows: at West 135th Street and the viaduct, the drive “with an elevation of 80 feet above the river, will curve away to the north” and continue over West 138th Street. This bridge would be “of masonry, artistic in detail, and contain in its abutments public comfort houses.” The road would then head westward, at a higher grade than the New York Central Railroad tracks. At West 143rd and 144th streets, the parkway would widen to 300’, crossing over West 144th Street on a “handsome bridge.” Riverside Drive would improve the transportation network of the area by connecting with “streets which at present lead nowhere, and have no junction with thoroughfares at their westerly end.” “New York’s most beautiful driveway” would then cross on a bridge over West 151st Street before going through Audubon Park and Trinity Cemetery where it would be carried on a bridge over West 155th Street before it “makes its northern exit upon the Boulevard Lafayette.”¹¹⁵ By 1909, there were plans in place to extend Riverside Drive to West 245th Street in the Bronx and then along Fieldston Avenue to Van Cortlandt Park. In keeping with the picturesque quality of the Bronx, the drive would follow the topography of the area, creating “a distinctive feature to be found in no other part of the city.”¹¹⁶

By 1911, the extension of Riverside Drive from West 145th to 158th streets, supervised by George Stuart Williamson and built by J.C. Rodgers, had been finished. This section included the cantilever over the New York Central Railroad from West 153rd to 155th streets. The measurements for this section were given as a total roadway width from curb to curb equaling 60’. The cantilever section cost \$250,000 and was 100’ long and 50’ wide. The cantilever sat on a masonry block wall with arches. At the end of this section, the drive originally made an S-curve, probably to avoid a house as seen in a

113 For images, see “Riverside Drive, St Clair Place,” Percy Loomis Sperr, Photographer, 1931, in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call nos. 0967-E2, 0967-E3, dig. id. 722799F, NYPL Digital Gallery; “Viaduct, Riverside Drive, One Hundred and Twenty-Fifth Street,” in Mid-Manhattan Picture Collection, Call No. PC NEW YC-Brid, dig. id. 800513, NYPL Digital Gallery; “Elimination of Grade Crossing W 133rd St, Looking North,” 1925, in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call no. 0973-D5, dig. id. 722956F, NYPL Digital Gallery.

114 “Plans Ready for New Driveway,” *New York Times*, December 14, 1902, 27.

115 “Plans Ready for New Driveway,” 27.

116 “Opening Up Riverdale,” *New York Times*, September 19, 1909, XX2.

photograph.¹¹⁷ The Board of Estimate put the extension of the drive past West 158th Street on hold in 1911.¹¹⁸

By 1913, talk had resumed of extending Riverside Drive.

For many years city officials have been dealing with the problem of how to extend Riverside Drive clear up into the Bronx, thus making it one of the longest and most beautiful drives in the world. Not many years ago the northern limit of the Drive was at 125th Street and Grant's Tomb. In the McClellan administration it was extended as far as 155th Street. Now Borough President McAneny has a plan to continue the famous thoroughfare across the deep 158th Street valley, along the Hudson to Inwood Hill, over the Spuyten Duyvil by means of the contemplated Henry Hudson Memorial Bridge, and thence as far into the northern part of the State as the city desires to build.¹¹⁹

Frederick Law Olmsted Jr. and Arnold Brunner presented their plans to Manhattan Borough President George McAneny, which supplanted those created in 1911. They made specific recommendations, including acquiring additional lands, negotiating with New York Central Railroad about covering the tracks north from Dyckman, continuing the drive and park into Yonkers and working with the City of Yonkers and the State Highway Commission to have the road go further northward, and constructing the improvements recommended by engineers along the road. At West 158th Street, where Boulevard Lafayette terminated, the issue was bridging the valley at that location, and the engineers settled on a viaduct with a sidewalk on the west side for pedestrians to enjoy the views. A masonry arch bridge allowed West 158th Street to pass under the drive.¹²⁰ Between West 165th and Dyckman streets, the drive would be 60' wide with a sidewalk along its western edge.¹²¹ Many of these recommendations would be fully realized by Robert Moses in the 1930s, although it would be done via the Henry Hudson Parkway and the merging of the parkway and Riverside Drive at Inwood Hill Park.

117 For images, see "Riverside Drive and Viaduct, New York, NY," Detroit Publishing Company Postcards 9546, call no. MFY 95-29, dig. id. 68370, NYPL Digital Gallery; "Riverside Drive, N, 155th Street," Ewing Galloway, Photographer, 1934, in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call no. 0967-F5, dig. id. 722807F, NYPL Digital Gallery; "Riverside Drive, 155th Street," in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call no. 0967-F3, dig. id. 722805F, NYPL Digital Gallery.

118 "Riverside Drive Extension," *New York Times*, February 12, 1911, XX1; photograph, "Riverside Park Extension, Looking North," with caption reading "The Plane trees in this picture were planted in 1911 and are flourishing to-day because they were planted under normal conditions," from the City of New York/Department of Parks/Annual Report/1914, p. 47, M-71, neg. 776, Olmsted Center.

119 "Planning to Extend Riverside Drive Up to the Bronx," *New York Times*, June 15, 1913, SM3.

120 "158th Street (West), Riverside Drive," in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, call no. 0662-82, dig. id. 715696F, NYPL Digital Gallery.

121 "Planning to Extend Riverside Drive," SM3.

The memorialization of Riverside Park and Drive can be traced to the burial of Ulysses S. Grant in a temporary tomb in 1885 near Claremont, which set off “a tradition of sculptural monuments in the park.”¹²² Grant’s Tomb was a significant landmark that dominated the landscape as it stood on a hill with pedestrian paths winding up to it.¹²³ Constructed opposite Grant’s Tomb was an overlook shelter with a flat roof held up by twelve columns and at the four corners by piers. Stairs at each end flanked by cast light standards led down to the lower level of the overlook. Built into the slope underneath the shelter was a comfort station with doors at each end.¹²⁴

The early twentieth century saw additional monuments built. These included: Soldiers and Sailors Monument at West 89th and 90th streets, designed by Charles and Arthur Stoughton and carved by Paul Duboy, 1902; Robert Ray Hamilton Fountain, designed by Warren and Wetmore at West 76th Street, 1906; Franz Sigel Monument at West 106th Street by Karl Bitter, 1907; Woman’s Health Protective Association Fountain at 116th Street, sculpted by Bruno Louis Zimm, 1910; Firemen’s Memorial at 100th Street sculpted by Attilio Piccirilli, 1913; Samuel Jones Tilden Statue at 112th Street by William Ordway Partridge, 1926; Lajos Kossuth Statue at 113th Street, sculpted by Janos Horvai, 1928. Later monuments included: Warsaw Ghetto Memorial at 91st Street, 1947; Eleanor Roosevelt Memorial at 72nd Street, sculpted by Penelope Jencks, 1996; and Ralph Ellison Memorial at 150th Street, sculpted by Elizabeth Catlett, 2003.¹²⁵ The Colonial Dames of America gave the city a bronze electric light standard that sat at Riverside Drive and West 72nd Street in 1910, which is in the vicinity of the Eleanor Roosevelt Memorial. The standard was elevated on a pedestal and centered in a circular bed of plantings with a wide sidewalk surrounding it.¹²⁶ As Elizabeth Cromley points out, the placement of the monuments along Riverside Drive on the edge of the park serve to transition between the solidity of the residential housing along the drive and the active outdoor recreational park environment. The monuments also impart a certain stateliness upon the drive, “superimposing a layer of ‘high’ culture on the nature that Olmsted’s era

122 Cromley, 243.

123 See “Riverside Park, Showing Tomb of General Grant,” from The City of New York, Department of Parks, Report for the Year 1902, opposite p. 10, M-71, neg. 219, Olmsted Center; “Grant’s Tomb and Riverside Park, Looking South, View of Hudson River at Right,” from the City of New York, Department of Parks/Annual Report/1916, page 76, M-71, neg. 889, Olmsted Center.

124 “New Shelter, Riverside Drive, Opposite Grant’s Tomb” from Department of Parks/City of New York/Annual Report/1909, p. 17, M-71, neg. 557, Olmsted Center; “Comfort Station, Beneath the Shelter, Opposite Grant’s Tomb” from Department of Parks/City of New York/Annual Report/1909, p. 19, M-71, neg. 558, Olmsted Center.

125 For a photograph of the Hamilton Fountain soon after its construction, see “Hamilton Fountain, Seventy-Sixth Street and Riverside Drive” from The City of New York, Department of Parks, Report for the Year 1906, p. 51, M-71, neg. 421, Olmsted Center. For a photograph of the Women’s Health Protective Association fountain, see “Drinking Fountain, Riverside Drive and 116th Street, Given to the City in 1910 by the Women’s Health Protective Association,” from The City of New York/ Department of Parks/Annual Report/1910, p. 13, M-71, neg. 585, Olmsted Center.

126 For a photograph, see “Bronx Electric Light Standard, Riverside Drive and 72d Street Given to City by Colonial Dames of America,” from City of New York/Department of Parks/Annual Report/1910, p. 11, M-71, neg. 584, Olmsted Center.

provided.”¹²⁷ They were also deemed to “help to heighten the brilliant effect, where... numbers of spirited horses and well-dressed people meet and mingle in a spirit of animated gayety.”¹²⁸

Finally, in 1913, under increasing community and city pressure, the railroad agreed to cover the tracks between West 72nd and 129th streets. Questions remained, however, as to how much it would cost, who would pay for it, and how the covered tracks would be incorporated into the park. Again, there were many proposals. In 1924, for example, Comptroller Charles R. Craig set forth a plan that called for a 25' landfill extension along the shoreline from West 72nd to 129th streets, a roadway on top of the enclosed railroad, new landscaping and new recreational areas.¹²⁹

In 1927, New York Central Railroad and the city finally reached an agreement to share the cost of covering the tracks to West 129th Street, as well as the cost of connecting an elevated West Side Highway from Canal to West 72nd Street. Since 1925, Manhattan Borough President Julius Miller had been arguing for the elevated highway as the solution to traffic congestion on the west side. His original idea was for a double-deck elevated highway that carried both rail and cars; the legislature changed this in 1927 to a simpler design that separated the elevated highway from the railroad right-of-way.¹³⁰ Miller overcame objections from business interests, citizen groups, and the Dock Department (who thought the highway would interfere with the planned piers), and the Board of Estimate approved the plan in 1929. As for the Riverside Park part of the agreement, the plan was based on an earlier McKim, Mead & White proposal in which the railroad would be enclosed in a ventilated tunnel designed to resemble a Roman aqueduct. The wall and terrace created by this structure would have a highway on top and pedestrian tunnels underneath for access to the river. The design consisted of a “high wall that was articulated like a Roman aqueduct with 50-foot-high arches moving in stately procession along the length of the park. The arches allowed light and ventilation into the railroad tracks enclosed behind the wall.”¹³¹ This plan differed from the 1891 plans, which had a terrace running alongside the river on which was located a road. Above this enclosure was a promenade and park. The railroad tracks were hidden in a deep cut, with a park on the other side sloping up to Riverside Drive. A 1910 plan showed a roof covering the tracks between West 83rd and 96th Streets with a road running on top. The park was located between this roof covering and Riverside Drive.¹³² A cross-section rendering from 1927 showed a retaining wall along the covered tracks. Graded fill created a gentle slope down to the bulkhead, which had a concrete retaining

127 Cromley, 243.

128 Stiles, 917-918.

129 “Riverside Park Evolution and Restoration,” unpaginated.

130 Robert A.M. Stern, George Gilmartin, and Thomas Mellins, *New York 1930: Architecture and Urbanism Between the Two World Wars* (New York: Rizzoli International Publications, 1987), 698.

131 Cromley, 246.

132 Sections reproduced in *West Side Improvement*, 15.

wall.¹³³ The covering for the tracks consisted of steel girders set on top of a retaining wall on one side and steel piers on the other.¹³⁴ This enclosure for 2 ½ miles would result in a “green hillside ungashed by railway cuts and no longer disgracefully fringed with railroad freight yards and unsightly dumps.” Furthermore, the park would allow access to the waterfront, which before had only been braved by the “extra-adventurous” since “a couple of narrow footbridges spanning the railway” were the only means available.¹³⁵

West Side Highway construction and the associated Riverside Park works began in 1929, but quickly stalled because of the Depression. By 1931, major portions of the highway between Canal Street and West 72nd Street were still incomplete. Only the segment between Canal and West 22nd Street was open, while the sections between West 22nd and 38th streets as well as from West 59th to 72nd streets were both still under construction. As for Riverside Park, only the foundations and retaining walls between West 72nd and 79th streets were in place.¹³⁶ At this point, Robert Moses stepped into the fray.

Robert Moses, heading the Parks Department, saw the potential of the park as an active recreation space. In 1930, at the annual Park Association dinner, Moses had presented his proposal for the West Side Improvement. In his sweeping plan, he called for the extension of the West Side Highway through Riverside Park, across the “Henry Hudson Bridge” into the Bronx and onward to the city line. Within the park, the muddy flats would be transformed into a beautiful park for the public to enjoy the Hudson River vista as well as the Manhattan skyline. If all this were done, motorists would be able to have an unimpeded drive from Manhattan to the George Washington Bridge, at which point they could choose to cross the bridge over to New Jersey, or continue the quick drive to the Bronx and beyond.

There were a number of reasons publicly given for the West Side Plan:

First, it was to remove the danger and nuisance of the railway tracks and railway yards at grade from St. John’s Park to the Harlem Ship Canal—a long-standing scar upon the physical face and a blot upon the fair fame of the city.

Second, it was to provide for express traffic up the North River shore of the island and thus relieve the rapidly accumulating pressure on other north and south arteries.

Third, it was to redeem for beauty and for pleasure a riverfront which had been abandoned for years to utilitarian purposes and private interests,

133 The 1927 Annual Report also shows fill leveled at West 110th Street. See “Riverside Park, Showing Extent of Filling Operations: Looking North from 110th Street,” from Annual Report of the Department of Parks/Borough of Manhattan for the Year 1927, p. 86, M-71, neg. 942, Olmsted Center.

134 “Cut and Cover Construction for existing railroad tracks,” neg. no. 23692, 10/22/?, Arsenal.

135 “Work Speeded on City’s Riverside Park,” *New York Times*, January 19, 1936, E10. This article also provides a description of what the park would contain when completed.

136 Cromley, 246.

ranging from steamship piers, railway yards and coal pockets to unsightly wastes used as hobo camps and dumps for refuse.¹³⁷

The parkway was also seen as a link in an expanded network of roads connecting New York City to its surrounding environs, “the parkway is designed to fill one of New York’s most pressing traffic needs--elimination of the bottle neck at the drawbridge at 220th Street and Broadway where there is much congestion on Sundays and holidays. This bridge is the gateway for the most direct route through the Bronx and Westchester to Upper New York State and New England and, as a result, draws most of the through traffic from the Hudson River crossing as well as from downtown Manhattan.” Furthermore, the parkway would be a “link in a through parkway and express highway system extending from the Battery in Manhattan to Peekskill, a distance of more than fifty miles. It will connect the Westchester parkway system with the West Side improvement.”¹³⁸

In 1934, work finally resumed on the West Side Improvement, with Robert Moses in charge of everything north of West 72nd Street. South of West 72nd, the West Side Highway remained the responsibility of Manhattan Borough President, which in 1934 was Samuel Levy, and it was still incomplete. The sections from West 59th to 72nd streets (1932) and West 22nd to 38th streets (1933) were finished; however, the stretch between West 38th and 46th streets was still under construction, and work on the West 46th to 59th streets section had not even begun (and would not begin until 1936).¹³⁹ As for Riverside Park, Moses quickly discarded most of the McKim, Mead, & White plan, claiming that the parkway would ride like a rollercoaster because of the pedestrian tunnels underneath. The design that the Board of Estimate approved in 1935 became the final plan: the railroad would still be covered, but above it would be a landscaped promenade.¹⁴⁰ The HHP would now be constructed along the shoreline on top of extra acreage created by fill. The McKim, Mead & White plan did not completely disappear, however. The section of the wall between West 72nd and 79th streets was incorporated into Moses’ plan as the support for the parkway between West 72nd and 82nd streets, which ran inland before swinging out towards the river.

In 1936, 20 acres were added to the park from West 72nd to 129th streets from fill obtained by private excavation work, tunneling, and a cut being dug for the New York Central Railroad. While adding fill increased the park’s acreage, it did not immediately enhance the park, as the area west of the railroad remained a barren wasteland, albeit larger.¹⁴¹ WPA workers were put to work spreading the fill, building a retaining wall and

137 H.I. Brock, “West Side Plan Proceeds on a New Basis,” *New York Times*, June 23, 1935, E10.

138 “3,000,000 Paid in for New Highway,” *New York Times*, April 20, 1935, 3.

139 “Motor Speedway Proving a Success,” *New York Times*, February 7, 1937, 49.

140 Cromley, 247.

141 For photographs, see “Making Park Land on River Front, 80th to 85th Streets, North River (Before)” from The City of New York/Department of Parks/Annual Report/1912, p. 70, M-71, neg. 633 and “Park Property Acquired Without Cost to the City (After),” from The City of New York/Department of Parks/Annual Report/1912, p. 71, M-71, neg. 634, both in Olmsted Center. The fill was typically held in

removing structures on the Hudson's banks.¹⁴² By the late 1930s, the reality of the park had strayed far afield from Olmsted's conception of it as a place to stroll and enjoy nature, the views of the Hudson, and the noble monuments along Riverside Drive. Instead, there were now numerous active recreational opportunities as well as a parkway running along the shore of the Hudson.

Recreational facilities added to the park under Robert Moses' direction included children's playgrounds with wading pools, sand boxes, and play equipment at West 74th, 82nd, 91st, 97th, 101st, 110th, 146th, and 162nd streets. Handball courts (such as at West 111th Street); softball diamonds (such as at West 73rd and 77th streets); tennis court at West 171st Street; track and field facilities with bleachers at West 74th Street; baseball and football fields with bleachers (such as at West 103rd and 165th streets); roller skating on designated esplanades (such as between West 83rd and 86th streets); basketball courts (such as West 102nd Street); eighteen clay horseshoe courts at West 111th Street; and at West 105th-106th streets, there was roller skating, basketball, shuffleboard, paddle tennis and dancing.¹⁴³ When completed in 1937, the park boasted comfort stations, benches, drinking fountains, 140,000 lineal feet of footpaths, and landscaping that included 13,000 trees and 350,000 shrubs.¹⁴⁴

Not only was Moses able to finally complete Riverside Park by solving the problem of the railroad, but also he was able to construct a parkway along its western edge. Following the precedent of the Bronx River Parkway constructed to the north, Moses planned a parkway through the park that minimally impacted the parkland and interacted gracefully with its surrounding environs by utilizing sympathetic building materials and following the natural topography. Despite this success in finally ridding the park of the railroad, Moses' plans for the rest of the Henry Hudson Parkway were met with some opposition.

The Controversy

The plan through Riverside Park was set, but the rest of the route through the Bronx seemed far more nebulous. At the Park Association dinner, Robert Moses had assured his audience that as ambitious as his West Side Improvement sounded, it was completely realistic. What was not obvious at the time was the exact route of the northern section of the parkway beyond Riverside Park. As early as 1904, appropriations had been made for a Henry Hudson Bridge across the Harlem Ship Canal, and in 1909, the city had acquired the land for the bridgehead in Spuyten Duyvil (where an incomplete Henry Hudson Memorial languished). Then the bridge project stalled. In his account of the years up to

place by a riprap bulkhead, as seen in Rendering, "Riverside Park Extension, Typical Section of Rip Rap Bulkhead and Fill Between Railroad Right of Way and Bulkhead Line," from City of New York/Department of Parks/Annual Report/1914, page 84, M-71, neg. 785, the Olmsted Center.

142 "West Side Project Adds to City Land," *New York Times*, February 29, 1936, 17.

143 "Before and After, 1637-1937," *West Side Improvement*, see pp. 18 and 28 for a complete listing of facilities available at opening.

144 "Before and After, 1637-1937," *West Side Improvement*, 20.

1934, Moses derided previous attempts to build the bridge, noting that the only reminders of the long-proposed bridge were:

several frequently repainted billboards which conveyed to a cynical public the dubious information that the existing administration, represented by the stalwart enterprise of Commissioner X, would shortly toss a bridge over the Harlem, linking Riverside Drive with the Bronx and the north country. The controversial route through Spuyten Duyvil, Riverdale and Van Cortlandt to the Westchester parkway system, though implied on the billboards, was discreetly shrouded in mystery.¹⁴⁵

One could say the same of Robert Moses' own plans for the northern route. In June 1934, the *New York Times* reported rather vaguely that the parkway would extend "...generally from the northern end of Riverside Drive to a point yet to be designated in the Bronx...Eventually the new road may end at Van Cortlandt Park, or it may reach beyond to connect with the Westchester park system."¹⁴⁶ Robert Moses, who never left anything to chance, certainly knew where he wanted the parkway to go.

In previous plans, the northern section of the parkway swung inland just south of Fort Tryon Park, thus bypassing it and the adjoining Inwood Hill Park by curving around their eastern border. The road would then be carried on a bridge built from a low point next to Inwood Hill Park over to the Marble Hill area situated on the corresponding lowland on the Bronx side. In Moses' plan, however, the parkway ran along the *western* section of Fort Tryon Park and Inwood Hill Park, crossed the Harlem River on a bridge spanning from high bluff to high bluff, landed in the quiet community of Spuyten Duyvil, and then cut a wide arc eastward into Van Cortlandt Park on its way to the Westchester border.

Many community members in the affected areas protested. Robert Moses' plan to run the Henry Hudson Parkway over the existing Riverside Drive, right below Fort Tryon Park, would destroy its quiet serenity. To the north, Inwood Hill contained what was thought to be the last primeval forest left in Manhattan. The controversy over the parkway and Henry Hudson Bridge began in March 1935 when the City Club issued its opinion that parkway construction was ruining the woodland in Inwood Hill Park. One member of the committee, Nathan Straus who had formerly served as president of the Park Association of New York City, accused Moses at a meeting of "treating the parks 'as if they were his own private property.'"¹⁴⁷ A few months later, in May, the Regional Plan Association issued a statement condemning the proposed route in the Inwood Hill Park area.

While the present bridge project [Henry Hudson Bridge] should be welcomed as a valuable addition to the New York City park and parkway

145 Robert Moses, "A New Parkway and a Great Waterfront Reclamation," in *Opening of the Henry Hudson Parkway*, 7-8.

146 L.H. Robbins, "Transforming the West Side: A Huge Project Marches On," *New York Times*, June 3, 1934, XX2.

147 "Moses Defends Inwood Park Road," *New York Times*, March 23, 1935, 17.

system, its development as part of a toll highway, over which will be brought as much through traffic as can be persuaded to use it, brings a serious and unnecessary threat both to the local use of Inwood Hill Park and to the welfare areas adjoining the bridge on the Bronx side....¹⁴⁸

The association presented an alternative plan in which through traffic would be “routed on the east side of Inwood Hill and the western slope of the Tibbetts Brook Valley in the Bronx, crossing the Harlem on a lift bridge. It suggested that the Tibbetts Brook section be acquired now and temporarily connected at its southern end with the Henry Hudson bridge.”¹⁴⁹ Recalling the controversy later, Moses remarked quite acerbically that in the path of the Henry Hudson Bridge was a “huge, old decayed tulip tree” that supposedly dated from when the HALF MOON and Henry Hudson sailed up the river. He went on to state sarcastically:

There were other trees, many decrepit. In the middle was a kiln where an Indian princess taught ceramics under dubious auspices. She had a son who didn’t work. Both were on relief, and the relief checks were delivered to the princess at a mail box fastened to a tree. The hullabaloo about disturbing the princess, the kiln, the old tulip tree, and other flora and fauna was terrific.¹⁵⁰

Across the Harlem Ship Canal, Spuyten Duyvil was a small village of mostly single-family houses. It was not as exclusive a neighborhood as neighboring Fieldston, but it was quiet, a quality at a premium in New York City. The community’s biggest thoroughfare was the grandiose-sounding Spuyten Duyvil Parkway, in reality a two-lane road barely 30’ wide and canopied by hundreds of shade trees. The parkway, as planned in 1881, was estimated to cost from \$720,000 to \$1 million with property owners paying half and the city the other half.¹⁵¹ The completed Spuyten Duyvil Parkway was described as traversing “through the beautiful regions of Riverdale and Spuyten Duyvil to the banks of the Hudson. Leaving Van Cortlandt Park to the south by way of either Sedgwick or Jerome Avenues, such parks as St. James, Poe, University, Washington Bridge, and Highbridge are passed.”¹⁵² Previously, drivers would have used secondary roads until they reached Broadway at the edge of the Van Cortlandt estate (which would

148 “Changes Proposed in Henry Hudson Parkway,” *New York Times*, May 3, 1935, 22.

149 “Changes Proposed in Henry Hudson Parkway,” 22.

150 Moses, *Public Works*, 187.

151 A newspaper article from 1881 reported on a two hour meeting held by the Commissioner of Parks and residents that hints at the contentious nature of the Spuyten Duyvil Parkway’s construction. A Mr Delafield reportedly argued that the parkway “would not be of much public good, that it was not needed, and that the assessments were excessive.” A supporter of the parkway, Mr. Hayden, argued that “the opening of the road would be simply an act of justice to people living in the neighborhood and that, apart from the cost of the land to be acquired, the necessary expenditures on the work would not exceed \$100,000.” See “The Park Department, Commissioners Still Unable to Agree,” *New York Times*, February 3, 1881, 8. See also, “Mr. Beekman Initiated,” *New York Times*, March 19, 1885, 8.

152 Berry, “Park System Known the World Over,” B4.

become Van Cortlandt Park in the 1880s).¹⁵³ This was the street that Robert Moses wanted to turn into a highway by land condemnation and tree removal. Residents feared that not only would the proposed Henry Hudson Parkway cut their community in two, but also that it would lead to uncontrolled population and economic growth that would forever destroy their country sanctuary.

In June 1935, residents of Spuyten Duyvil attempted to have the HHP routed away from their community, taking instead a path on a hill above Tibbetts Brook. According to the community spokesperson, the HHP would divide Spuyten Duyvil in half. He noted, “the proposed parkway is an anachronism in road building.... You don’t cut through town now. You skirt the edges.” The HHP engineers, however, said that the alternative route would be too expensive. They also reportedly noted “it is not the highway but the community of Spuyten Duyvil which is really an anachronism, since an isolated village can have no place within the boundaries of a city as big as New York.”¹⁵⁴

In Van Cortlandt Park, the interchange with the future Mosholu Parkway was in a section of the park that contained the last collection of fresh water marshes left in Manhattan. Protestors did not believe Moses when he told them that what was destroyed would not only be minimal but would also be replaced by landscaping that would rival the original.

All the protests were for naught. Robert Moses needed this particular route for financing reasons, and this was the route that the Board of Estimate approved in 1935. Regarding the controversy, the *New York Times* noted with amusement that despite being called a “czar” by Bronx Borough President James Lyons for his high-handed tactics, Moses was undismayed and “hurried away to let the contracts for the actual work on the job.” The *Times* defended Moses’ actions, commenting that what was most important for the public to understand was that the entire project was “in active process towards the objective-- which is to provide Manhattan with a new outlet northward and to give the sunset side of our island a riverfront that realizes a fair share of the natural advantages with which it is so exceptionally endowed.”¹⁵⁵ That Robert Moses had the support of the *Times* was no accident. The *Times* was the most respected newspaper in New York City (indeed, in the country) and for much of Moses’ career, the paper was his. Moses had the undying devotion of Iphigene Ochs Sulzberger, who held two-thirds of the *Times* voting stock and who lionized him: “There has never been as great a public servant... He was a man of vision... a giant....”¹⁵⁶ Just as important as Sulzberger’s support, however, was Moses’

153 Michael Golan, “The Bronx Parks: A Wonder from the Past,” *Bronx County Historical Society* 12 (1978): 32-37. Frederick Van Cortlandt bought the lands between 1768 and 1788. His descendants remained there until 1836, when they sold it to James R. Whiting. See Thomas H. Edsall, *History of the Kings Bridge* (New York: privately printed, 1887), 54. Broadway was a former American Indian path that in 1691 was named Kings Way. This was an important route because it was safer than attempting to ply the powerful river currents of the Hudson. The road wound through the undulating terrain of northern Manhattan and Riverdale, traveling through Van Cortlandt manor.

154 “Spuyten Duyvil Asks Shift in Parkway,” *New York Times*, June 11, 1935, 19.

155 Brock, “West Side Plan Proceeds on a New Basis,” E10.

156 Iphigene Ochs Sulzberger quoted in Caro, *The Power Broker*, 458.

innate understanding of how to manipulate public opinion. He knew the public loved a good cause, and he certainly had one in the parks: “As long as you’re on the side of parks, you’re on the side of the angels. You can’t lose.”¹⁵⁷ As the wrangling over the Bronx route proved, Robert Moses did not lose.

The Concept

Robert Moses was ready to begin construction of his road, but what was his vision of a parkway? Highway design was in its infancy. In the 1930s, the National Park Service in conjunction with the Bureau of Public Roads was in the process of developing standards for road construction in the national parks. As far as limited access urban highways were concerned, New York City was the leader in designing and building highways, of which there were few.

Parkways were descendents of the nineteenth century “boulevard” referring to a grand, landscaped affair for strolling and leisurely riding, and it usually approached, or connected, city parks. The boulevard gradually combined with a later conception of parkways as curvilinear roads that worked with the natural topography to present the user with scenic vistas. In its modern form, parkway designs also included the built environment (landscaping, structures) as well as collateral considerations like the reclamation of wastelands. Landscape historian Norman T. Newton defined the modern parkway thusly:

The term now denoted a strip of land dedicated to recreation and the movement of pleasure vehicles (passenger, not commercial automobiles). The parkway was *not* itself a road, it *contained* a roadway. The strip of land was not just a highway with uniform grassy borders; it was of significantly varying width, depending on immediate topographic and cultural conditions...[I]t was meant for comfortable driving in pleasant surroundings, not merely for getting from one place to another as fast as possible.¹⁵⁸

Westchester County’s Bronx River Parkway, completed in 1925, was the first modern, limited-access, multi-lane (four lanes) parkway. The roadbed was only 40’ wide and designed for a gentle 25 mph (maximum 35 mph) travel, with tight curves, minimal median separations, no banking and no shoulders. It functioned primarily as an “aesthetic route,” in which landscape details and road alignments were key elements in a leisurely motoring experience.¹⁵⁹ A decade later, this type of parkway had evolved with

¹⁵⁷ Robert Moses quoted in Caro, *The Power Broker*, 218.

¹⁵⁸ Norman T. Newton, “Parkways and Their Offspring,” Chapter 39 in *Design on the Land: The Development of Landscape Architecture* (Cambridge, MA: The Belknap Press of Harvard University Press, 1971), 597.

¹⁵⁹ Paul Daniel Marriott, *Saving Historic Roads: Design and Policy Guidelines* (New York: National Trust for Historic Preservation and John Wiley & Sons, Inc., 1998), 11; Elizabeth E. Fischer, Heidi Hohmann, and P. Daniel Marriott, “Roadways and the Land: The Landscape Architect’s Role,” *Public Roads* (March/April 2000), 30-34.

innovations such as spiral curves and superelevations (which had become a safety standard by the 1930s). Spiral curves and superelevations, first used in railroad construction, help ease the effect of centrifugal force when transitioning from straight to curve. Superelevation is the banking of the outer edge of the road so that there is a slight slope, while the spiral curve lengthens the curve to avoid a sharp turn.¹⁶⁰ Furthermore, the “engineered” road, expressed by new terms such as *freeway* and *thruway*, emphasized the safe and *efficient* transportation of people, goods and services (including commercial traffic, usually banned on parkways) over aesthetic considerations, and became the preferred construction model. However, highway engineers such as Laurence Hewes cautioned against abandoning all efforts at beautification:

The optimum traffic operating conditions will include the elements of beauty or the aesthetic values of the highway. More and more it is recognized that motorists demand that sufficient attention be given to landscaping effects on modern roads...Highway location therefore must contemplate also evaluation of scenic positions and general pleasing effect of the finished road.¹⁶¹

Moses was a proponent of the parkway, as evidenced in the large number built under his purview. He wrote in an essay in the 1940s that “we should build parkways where they are appropriate; that is, where there are scenery and local values to preserve, where travel should be restored to passenger vehicles.”¹⁶² Thruways, on the other hand, were to be built for all sorts of vehicles and clear of traffic lights and at grade crossings. This did not mean that thruways were simply utilitarian routes to get from one point to another. Rather, Moses stated “obviously, more elaborate and more expensive landscaping is justified on a parkway than on an ordinary express road, but express arteries can also be planted intelligently and economically. In some places attractive scenery already exists and merely needs to be preserved. In other cases, it must be made.”¹⁶³ He railed against those who drove too quickly, “My idea of futility is to build a beautiful parkway for speed demons who can’t tell a flowering shrub from a bale of hay.”¹⁶⁴

When Moses took on the West Side Improvement project, which included the HHP construction, he noted in a memorandum: “the problem north of 72nd Street is totally different from the problem on the lower west side. From the beginning of Riverside Park north, the problem is one of parkway as distinguished from highway construction, and of complete restoration or reconstruction of the whole of Riverside and Fort Washington Parks.” The work would require not just civil engineers, but also park, parkway and

160 Mary E. Myers, “Iron and Asphalt: The Evolution of the Spiral Curve in Railroads and Parkways,” *Public Roads* 65, no. 2 (2001): 23-27.

161 Laurence Ilsley Hewes, *American Highway Practice*, 3rd printing (New York: John Wiley & Sons, Inc., 1947), 10.

162 Moses, “Tomorrow’s Cars and Roads,” 4.

163 Moses, “Tomorrow’s Cars and Roads,” 5.

164 Moses, “Tomorrow’s Cars and Roads,” 8.

landscape experts who could reconcile the needs of various types of park users as well as work with the topography.¹⁶⁵ Moses provided three ways to solve the problem:

1. Reclamation of the area west of the tracks for active recreation.
2. Provision for easy access to this area over the railroad tracks by roofing over these tracks, and temporarily by additional pedestrian overpasses.
3. Provision of pleasure vehicle traffic from the West Side Elevated Highway so far as possible along the water front to Dyckman Street, where a connection can be made with the Henry Hudson Parkway, involving an extension of the bulkhead line.¹⁶⁶

The result was a parkway that combined a recreational component with the efficiency of a freeway by moving traffic quickly and efficiently through recreational and landscaped areas.

CONSTRUCTION OF THE PARKWAY

With the plans for the parkway finally hammered out, construction could begin. Robert Moses entrusted the creation of this urban parkway to a select group of men with whom he had worked on other projects: engineers Madigan-Hyland, Emil H. Praeger, Robinson & Steinman, and Waddell & Hardesty; architects Clinton F. Loyd and Aymar Embury II; and landscape architect Gilmore D. Clarke.

Michael J. (Jack) Madigan (1894-1981) learned engineering on the job, beginning at age 13 as a water boy for construction crews. Though he had no formal education, he proudly surrounded himself with talented “Phi Beta Kappa keys” such as Emil H. Praeger (1892-1973).¹⁶⁷ Madigan formed Madigan-Hyland in 1928 with Richard V. Hyland (1895-1952), a Notre Dame graduate whom he met in 1927. Madigan-Hyland became Robert Moses’ favorite engineering firm; their many projects included the Triborough and Bronx-Whitestone Bridges, the Belt Parkway, and the reclamation of the Flushing site for the 1939 World’s Fair.

Emil Praeger served as the Chief Engineer for the Henry Hudson Parkway. A graduate of the Rensselaer Polytechnic Institute, he was the chief engineer for Madigan-Hyland from the late 1930s to 1949. Among his many accomplishments was his design of the floating concrete piers for the Normandy invasion during World War II, the Tappan Zee Bridge (1952-55), and Dodger Stadium in Los Angeles.

¹⁶⁵ Memorandum to the Mayor on Park Department Revised Plan for West Side Improvement in Riverside Park, by Robert Moses, June 10, 1935, p. 2, Arsenal.

¹⁶⁶ Memorandum to the Mayor, June 10, 1935, p. 3.

¹⁶⁷ Term used by Jack Madigan, quoted in Caro, *The Power Broker*, 536.

David B. Steinman (1886-1960) of Robinson & Steinman was already a well-known bridge builder when he worked as consultant on the Henry Hudson Bridge. He received his civil engineering degree from Columbia where his thesis (1908-09) was “Design of the Henry Hudson Memorial Bridge as a Steel Arch.”¹⁶⁸

Waddell & Hardesty was another well-respected firm used by Moses that specialized in bridge design. J.A.L. Waddell (1854-1938), a Rensselaer graduate, established the company in 1887. A pioneering bridge engineer, Waddell wrote influential works on bridge design, including *The Designing of Ordinary Iron Highway Bridges* (1884), and *American versus English Methods of Bridge Designing* (1886), both still in print, and patented the Waddell truss.¹⁶⁹

Aymar Embury II (1880-1966) studied engineering at Princeton and built twenty bridges, including the Triborough Bridge in New York City. In the 1930s, he held the position of principal designer for Robert Moses, designing buildings at Prospect Park Zoo and Central Park Zoo. He also designed Beaux-Arts style mansions on Long Island. Embury was also known for his work with concrete and steel.¹⁷⁰

Gilmore D. Clarke (1892-1982) was a Cornell graduate and one of the most famous parkway designers. He worked for the Bronx Parkway Commission from 1916 to 1923. After his term with that commission ended, he joined the Westchester County Park Commission as its chief landscape architect, where he participated in the development of the Saw Mill River Parkway and the Hutchinson River Parkway. He was a consultant to the federal government’s work on the Mount Vernon Memorial Highway, George Washington Memorial Parkway, Blue Ridge Parkway, and the Baltimore-Washington Parkway. In 1934, Clarke went into private practice, starting his own firm: Clarke and Rapuano, who designed the Palisades Interstate Parkway and worked on other landscaping and transportation projects in the New York City area.¹⁷¹

After \$3 million in bonds had been raised, contracts were let for construction of the parkway in 1935. By April, according to the *New York Times*, the State Department of

168 Biographical information from M.A. Wagner, “Steinman’s Biography” [article online], accessed September 8, 2005, available at http://filebox.vt.edu/users/mawagner/steinman_biography.htm.

169 Biographical information from Hardesty-Hanover LLP, “Hardesty & Hanover History Timeline” [article online], accessed September 8, 2005, available at www.hardesty-hanover.com/timeline/timeline.frame.html.

170 Biographical information from Artnet, “Embury, Aymar II” [article online], accessed September 8, 2005, available at www.artnet.com/library/02/0259/T025976.asp.

171 For more information on Clarke, see Domenico Annese, “Gilmore Clarke,” in *Pioneers of American Landscape Design*, eds. Charles Birnbaum and Robin Karson (New York: McGraw Hill, 2000), 56-60; see Richard Quin, “Blue Ridge Parkway,” HAER Nos VA-NC-42, Historic American Engineering Record, National Park Service, U.S. Department of the Interior, 1997, 33-37; for Clarke’s involvement in Mount Vernon Memorial Highway and George Washington Memorial Parkway, see Timothy Davis, “George Washington Memorial Parkway,” HAER No. VA-69, National Park Service, U.S. Department of the Interior, 1994/98. See also Dawn Duensing, “Bronx River Parkway,” HAER No. NY-327, National Park Service, U.S. Department of the Interior.

Public Works had started work on the northern section of the parkway, and relief workers had begun clearing the forests of Inwood Hill Park.¹⁷² The parkway from Spuyten Duyvil and Riverdale was the responsibility of the state, since it was considered an extension of the Saw Mill River Parkway.¹⁷³ Meanwhile the Henry Hudson Parkway Authority, of which Moses was the sole member, had to acquire land for the parkway, estimated to cost \$700,000. By April 1936, Moses could confidently announce that engineers were drawing up the plans for the parkway from West 129th to Dyckman streets, estimated to cost \$6 million, and that work was progressing on covering the railroad tracks.¹⁷⁴ The New York City Parks Department and New York Central Railroad first started covering the railroad tracks between West 72nd and 83rd streets, measuring 1/2 mile. This section of covering was estimated to cost \$5 million, excluding any park or waterfront improvements.¹⁷⁵ The 4.5-mile stretch of the Henry Hudson Parkway between the Westchester County line and the Harlem River, including the Henry Hudson Bridge, was completed at the end of 1936, making it the first finished section of the parkway.¹⁷⁶ By October 1937, the next section between West 72nd and Dyckman streets had been finished. The final portion of the project, completed in May 1938, was the addition of the upper deck of the Henry Hudson Bridge and the associated widening of bridge approaches.

There were two types of bridge construction used on the parkway: rigid-frame concrete and girder and floorbeam bridges.

Rigid-Frame Concrete Bridges

Henry Hudson Parkway designers utilized rigid-frame construction for bridges because of its proven utility; it was well-suited for short spans of up to 120' under conditions of restricted headroom; it was strong and economical to build; and in both concrete and steel applications, it was very adaptable for various architectural expressions.¹⁷⁷ Arthur G. Hayden's rigid frame bridge, developed in December 1921, stemmed from the "need to develop a cost-effective yet attractive bridge design" to replace the traditional arched bridge, whose high profile and abutments required a great deal of site work. Arthur G. Hayden (the structural engineer for the Bronx Parkway Commission) developed the rigid-frame construction, and engineers first used it extensively on the Westchester County parkways.¹⁷⁸ The strength of the bridge came from the "rigid connection between the vertical posts and horizontal beams" and "resulted in a bridge of slender proportions that

172 "\$3,000,000 Paid in for New Highway," *New York Times*, April 20, 1935, 3.

173 "\$3,000,000 Paid in for New Highway," 3.

174 "Riverside Project Pushed by Moses," *New York Times*, April 24, 1936, 8.

175 Memorandum to the Mayor, June 10, 1935, p. 5.

176 See "Hudson Parkway Opens Tomorrow," *New York Times*, December 11, 1936, 5, and "New York Opens Hudson Parkway Link to Bronx," *New York Times*, December 12, 1936, 3.

177 G.A. Hool, "Introduction," in Arthur G. Hayden and Maurice Barron, *The Rigid-Frame Bridge*, 3rd ed. (New York: John Wiley & Sons, Inc., 1950), vii.

178 Arthur G. Hayden and Maurice Barron, "General Notes on Rigid-Frame Bridges," Chapter 11 in *The Rigid-Frame Bridge*, 184. Also, Gilmore D. Clarke, "The Parkway Idea," in *The Highway and the Landscape*, ed. W. Brewster Snow (New Brunswick, NJ: Rutgers University Press, 1959), 33-55.

required less concrete than conventional structural systems.” Other useful features of the rigid-frame bridge included its “relatively flat arch” that “provided better clearance than true arch bridges, where the arch’s pronounced curvature restricted headroom in the outside lanes.” The bridge’s profile “cut down on the height of the overall structure, reducing the amount of grading required to carry cross traffic over the bridge at an acceptable grade.” Finally, the rigid-frame bridge could have a variety of surface treatments.¹⁷⁹ Consequently, it was used on a number of subsequent parkways, including the Mount Vernon Memorial Highway (in Virginia), the Blue Ridge Parkway (in Virginia and North Carolina), the Merritt Parkway (in Connecticut), and New York State parkways like the Taconic State Parkway. Most of the Riverdale bridges were rigid-frame concrete spans. The overpass at Broadway was also a rigid-frame bridge, but in steel. Of the thirteen Bronx bridges, eleven dated between 1936 and 1938, and many can be attributed to the work of landscape architect Gilmore D. Clarke, who believed that bridges needed to be “honest” in their form and function and needed to fit in with their surroundings. In an article on the design of rigid-frame concrete bridges, he explained his philosophy:

The stone facing need not detract from the frankness of the structural design since the stone serves merely to protect the exposed faces of bridges from the elements and to aid in bringing the structures into harmony with their surroundings. This is more particularly true in a terrain where natural rock outcrops abound; in sections where there are no native outcroppings, exposed concrete, or a combination of concrete and steel may be used appropriately.¹⁸⁰

The bridges along the HHP in the Bronx featured ashlar masonry cladding that helped unify not only the structures along the parkway with each other but also complemented its natural setting. Most of the Bronx crossings were single or double span segmental arch structures (with the exception of the triple span Manhattan College Parkway bridge) with piers placed in the center median and broken rangework masonry on their facades, abutments and retaining walls. The designers varied the bridges by subtle differences in their decorative granite cutwaters and by different parapet treatments. For example, the West 239th Street bridge had a corbelled cone-topped cutwater, while the West 252nd Street bridge had a beveled top. The Manhattan College Parkway bridge featured timber guardrails. The rigid-frame concrete bridges are located at Kappock Street, West 232nd Street, West 239th Street, Manhattan College Parkway (then called the Spuyten Duyvil Parkway), West 246th Street, West 252nd Street, Riverdale Avenue, Fieldston Road, and Mosholu Parkway.¹⁸¹ The Immick Company, Inc. of Meriden, Connecticut, won the bid

¹⁷⁹ Duensing, “Bronx River Parkway,” 75.

¹⁸⁰ Gilmore D. Clarke, “The Architecture of Short-Span Bridges,” in *The Rigid-Frame Bridge*, 227.

¹⁸¹ Recent work on the West 252nd Street bridge has revealed that the parapet has a concrete core and stone cladding. The steel picket fences on some bridges (like West 232nd Street Bridge) are the result of a compromise between the community and New York City Department of Transportation (NYC DOT). In 2000, the NYC DOT planned to rehabilitate some overpasses, which would involve installing concrete barriers in front of the stone parapets with chain link fencing on top, but the compromise was the steel

for the West 239th Street bridge with an estimate of \$249,292.¹⁸² The construction details can be seen in the drawings for the West 246th Street bridge plans, which specified that stone and dimensioned masonry be used in its construction. The masonry had to be of an approved color and any exposed surface “shall be free from all scars and tool marks except as noted.” Any exposed concrete was to “have rough board marks showing” from the rough sawn yellow pine used for the forms. If the finish was not acceptable, “the entire surface shall be rubbed as provided in the specifications.”¹⁸³

The Kappock Street underpass (1937) was a single span segmental arch bridge with a decorative stone parapet. Broken rangework masonry faced most of its retaining walls; however, part of its concrete barrel and ramp walls were treated to look like clapboard siding. Parkway architects used this rather utilitarian finish in other places: the western promenade walls that formed the backboards for the West 101st and 102nd streets recreational area in Riverside Park, and the abutments and walls of the Dyckman Street Bridge. The single span elliptical arch and its masonry treatment distinguished Fieldston Road bridge (1936). Unlike the more refined cut masonry of the other bridges, the stones used in this bridge were much larger, more irregular, and were quarry-faced, giving it a rather massive and more rustic effect. The Mosholu Parkway crossing was also distinctive. Constructed by the State Department of Public Works and financed with federal highway aid, the bridge had been planned since 1937 but was not built until 1951. One of its designers was Gilmore D. Clarke, and like his other creations, it blended with its environment and with the other bridges. This bridge had two arches: a semi-circular arch that spanned a single access lane to the Mosholu Parkway, and a larger elliptical arch that spanned the two Henry Hudson Parkway southbound lanes. The planned construction of the Major Deegan Expressway through Van Cortlandt Park, “made necessary a complete rearrangement of roads.” The Mosholu Parkway bridge was the last grade separation structure built on the parkway, effectively removing “the last remaining point of cross traffic on the Hudson Parkway” while also ridding the site of traffic jams.¹⁸⁴

Girder and Floorbeam Bridges

The other major bridge construction system parkway engineers utilized was the girder and floorbeam type, which was typically used for longer spans and for railroad crossings, especially when done in steel. It was used for the framing for the Henry Hudson Parkway viaduct, for example, between West 72nd and 79th streets.

Between the city limits and Dyckman Street, girder and floorbeam spans, mostly built between 1935 and 1938, were located at Dyckman Street (the span for southbound HHP),

picket fencing. Information provided by Hilary Hinds Kitasei, Chair, Henry Hudson Parkway Task Force, Riverdale Nature Preservancy.

182 “Bronx Bridge Bid \$249,292,” *New York Times*, January 2, 1936, 3.

183 Henry Hudson Parkway, “Architectural Elevations of Bridge No. 2 at Riverdale Ave & W 246th Street,” Marked Unofficial February 7, 1936, Olmsted Center.

184 “2 Arterial Links to Speed Traffic Will Be Opened in City Tomorrow,” *New York Times*, December 12, 1953, 1.

West 236th Street (1955), Van Cortlandt Park (which formerly carried the railroad's Putnam division), and the Van Cortlandt Park Equestrian Bridge. This bridge (1937) was a typical girder bridge, with haunched plate girder and splice plates on the main span and a decorative steel railing. The original railroad viaduct at Van Cortlandt park had what appear to be concrete abutments with pilasters at the ends. A flight of stairs at one end of the bridge led from the tracks to a sidewalk that followed the road under the viaduct.¹⁸⁵

The steel or concrete girder and floorbeam bridges provided a frank expression of their construction unlike the masonry clad rigid frame concrete spans. They had a certain aesthetic appeal because their functional nakedness acknowledged the realities of industrialization and did not pretend to be part of a "natural" landscape that no longer actually existed. In this sense, the bridges were perhaps truer representations of Gilmore Clarke's aesthetic ideal of "frankness of design." However, bridge architects still made the effort to incorporate the steel spans into their landscaping. For example, although the Van Cortlandt Park Bridge was of steel, its abutments and retaining walls were still faced in ashlar masonry like the other Riverdale bridges. The neighboring Van Cortlandt Equestrian bridge (1937) was also a girder and floorbeam span, but in concrete; it too echoed the design of other bridges, this time with decorative granite cutwaters on its central pier.

Westchester County to Dyckman Street

The first completed section of the HHP, finished in 1936, began at the Westchester border as the "Saw Mill River Parkway Extension" and curved through Van Cortlandt Park westward into Riverdale. This extension was the responsibility of the state. The Fieldston Road overpass, near West 253rd Street, linked Fieldston and Mosholu neighborhoods for the first time. This area was the one section of the right-of-way that involved substantial condemnation of private property. The parkway then continued on to the Harlem River Ship Canal, which had been developed in 1826 as a shipping canal that ran northwards through the Harlem River and westward through Spuyten Duyvil Creek.¹⁸⁶ At the time, the Harlem was little more than a stream, and the creek was fairly shallow. Ultimately, the Harlem River Ship Canal took 112 years to complete, in part due to legal wrangling with property owners.¹⁸⁷ The first phase of canal construction ended in 1895, but the project took nearly forty years more, finally reaching completion in 1938 when it officially opened. The canal allowed large freighters to bypass lower Manhattan completely on their way to and from the Atlantic Ocean, cutting 20 miles off their journey time.¹⁸⁸ The 400' channel "is now used mostly by barges, tour boats, and

¹⁸⁵ "Railroad Viaduct Van Cortlandt Park" from the City of New York, Department of Parks, Report for the Year, 1906, page 91, X-92, neg. 430, Olmsted Center.

¹⁸⁶ The word Spuyten Duyvil is thought to have come from a Dutchman who said it could be crossed "in spite of the devil."

¹⁸⁷ For example, the Johnson Foundry, which had helped produce artillery for the North during the Civil War and had withstood earlier plans for demolition, finally closed in 1923 by order of the Supreme Court of New York State.

¹⁸⁸ Gary Hermalyn, "The Harlem River Ship Canal," *Bronx County Historical Society* 20, no. 1 (1983): 20.

the rowing sculls of the Columbia University crew. The building of the canal had the peculiar geographical effect of severing 52 acres of Manhattan from the rest of the island.”¹⁸⁹ From the Harlem River Ship Canal, the parkway continued on the Henry Hudson Bridge to Inwood Hill Park and then onward to the Dyckman Street Bridge.

The State Department of Public Works in Albany, New York, took bids for the paving of the parkway from the New York City limits to Riverdale Avenue, which was a distance of 1.5 miles. The work consisted of paving two three-lane concrete roadways. Immick Company, Inc, of Meriden, Connecticut, was the low bidder at \$329,585.¹⁹⁰ The company also won a bid to build “a bridge to carry the Henry Hudson Parkway under the east roadway of Riverdale Avenue” as well as “grading and the construction of a double-span structure having a fourteen foot clearance” estimated at \$263,837.45.¹⁹¹

In the summer of 1934, relief workers under contract to the State Department of Public Works poured the foundations of the Dyckman Street Bridge and cleared and graded parkway rights-of-way in Inwood Hill Park. The rapid pace of work was exemplified by the spanning of Broadway. The bridge contract was let in early March, and concrete piers were in place by July. Then, over a single night in mid-July, crews swung five steel girders (each 80’-11.75” long, weighing about 15 tons) into place; by morning, commuters were passing under the beginnings of a bridge.¹⁹² The bridge featured stone masonry wing walls and abutments with cut granite quoins and coping.¹⁹³

The Broadway overpass was one of sixteen bridges engineers built between the northern city limits and Dyckman Street. In the Bronx, there were no intervening natural buffers such as the cliffs of Inwood or Riverside Park in Manhattan between the parkway and residential areas; thus, engineers had to plan for fairly frequent interchanges with the surrounding communities. Because bridges were going to be prominent, even defining features of the landscape, architects and engineers paid a great deal of attention to their designs and to the surrounding environment. The bridges included the thirteen located in the Bronx, the Henry Hudson Bridge, and the two Dyckman Street bridges, and their construction fulfilled one of the basic tenets of parkway design--the elimination of at-grade crossings. As the *New York Times* noted in 1935: “the bridge builder continues to play an increasingly important part in the construction of new highways, for the overpass to eliminate intersections has become as fundamental a part of modern road designing as cement surfacing.”¹⁹⁴

189 Yarrow, C1.

190 “Bids Taken for Hudson Parkway,” *New York Times*, July 24, 1936, 5.

191 “Low Bridge Bid is \$263,837,” *New York Times*, November 16, 1935, 17.

192 “Broadway Bridged in a Single Night,” *New York Times*, July 13, 1935, 15.

193 Henry Hudson Parkway Authority, Henry Hudson Parkway, Dyckman Street Bridge, “Architectural Elevations and Sections, Design ‘A’,” Sheet 1 of 29, Drawing No. X 110 40-101, Olmsted Center.

194 Victor H. Bernstein, “Routes for Motorists Being Made More Open,” *New York Times*, July 13, 1935, AA9.

Henry Hudson Bridge, As Originally Constructed

The Henry Hudson Bridge spans the Harlem River Ship Canal. It was an engineering marvel of its day, opening to the public in 1936. The bridge was part of a larger plan to extend Riverside Drive to the Bronx, spearheaded by Borough President George McAneny. The construction of the bridge was part of the Regional Plan Association's push to create a comprehensive road network by connecting Manhattan with the Bronx and Riverside Park, the Henry Hudson Parkway, and the Saw Mill River Parkway in Westchester County and beyond.¹⁹⁵ Residents also wanted the bridge constructed to help alleviate traffic congestion in the Bronx.¹⁹⁶ A report submitted by Frederick Law Olmsted Jr. and Arnold W. Brunner addressed the issue of elevation and siting of the bridge, stating

we found ourselves finally forced to the opinion that it would be a serious artistic mistake to make the height of the Hudson Memorial Bridge so great that its approaches would pass right over the tops of the biggest hills on each side of the valley which it spans. We believe it will produce a more dignified and impressive effect as a whole if the bridge is fixed at a level which will permit the masses of the hills to count as dominant features in the landscape, against which the two ends of the bridge may firmly abut.¹⁹⁷

The bridge had to be constructed off center of the Harlem River Channel to circumvent the New York Central Railroad, which ran underneath the north abutment.¹⁹⁸ Its designers (Emil Praeger, Madigan-Hyland, Robinson & Steinman, and Waddell & Hardesty) had originally planned for a three-arch span to support six lanes on a single deck. The bankers were not convinced that enough motorists would want to use the bridge, so the final design became a two arch, four-lane span with a 42' roadway on a single deck.¹⁹⁹ Nevertheless, Robert Moses was so confident that the public would pay the 10-cent toll that the bridge was built to eventually support a second deck. This plan was structurally feasible because engineers used reinforced steel and built the bridge supports on solid rock on both sides of the canal. After Moses was finally able to convince bankers that the 10 cent toll on the bridge would be sufficient, he (through the Henry Hudson Parkway Authority) was able to sell \$3.1 million worth of bonds. The bond sale would "finance the entire parkway project from Riverside Drive to the junction of Riverdale Avenue and Spuyten Duyvil Parkway. The State Department of Public Works has assumed the burden of constructing the parkway from this point north through

¹⁹⁵ "A Prophetic Bridge," *New York Times*, February 12, 1935, 20.

¹⁹⁶ "West Bronx Asks for Traffic Relief," *New York Times*, October 19, 1930, 31.

¹⁹⁷ "Planning to Extend Riverside Drive Up to the Bronx," SM3.

¹⁹⁸ "Parkway Span Approved," *New York Times*, April 18, 1935, 25.

¹⁹⁹ Metropolitan Transportation Authority Bridges and Tunnels, "The Henry Hudson Bridge: Celebrating 60 Years," *From the Archive* (Winter, 1996).

Van Cortlandt Park to the Saw Mill River Parkway, and already has started construction with Federal highway aid funds.”²⁰⁰

Workers began construction in June 1935, and the bridge opened to traffic in December 1936. Thomas Crimmins Contracting Company of 734 Lexington Avenue, New York City, received the contract for the construction of the substructure, estimated to cost \$272,668.50. The company also had an alternate bid of \$324,090.50 that included stone cladding. The American Bridge Company won the contract to do the steel substructure with a bid of \$865,208.59.²⁰¹ Its hingeless arch construction required accurate engineering analysis and stress control during all phases, and because river and railroad traffic continued unabated during construction, the insertion of the crown piece (of the arch) necessitated a new approach to jacking so as to not block the river. Construction photographs show the arch being constructed at either end, finally meeting in the middle where the crown piece had to be inserted. Then the decking support was added and finally the deck itself.²⁰² When the bridge was completed, it was the longest fixed plate girder arch bridge in the world, with a main span of 840’. The mid-span clearance of 142.5’ above high water allowed ships to navigate under the bridge without a lift or swing mechanism. The advertisement of the bridge’s completion announced that it could “accommodate eight traffic lanes and two footwalks.”²⁰³

The toll booths for the bridge were stone masonry with iron doors and window frames, which were supposed to have either shatterproof or bulletproof glass. A vestibule on the ground floor served as the entrance to the toll booth. The vestibule opened to a locker room to the north. The locker room connected to a restroom. The toll booth also contained the supervisor’s room, which had a safe and a closet. Attached to the north end of the building was a police station.²⁰⁴

Dyckman Street Bridge

Dyckman Street Bridge, completed in 1937, originally carried both the north and south bound roadways (four lanes total) of the HHP. Gilmore D. Clarke was the architect, and the design resembled his work for the much larger Cross-Country Parkway viaduct over

200 “Gets Fund to Link Drive and Parkway,” *New York Times*, April 3, 1935, 25. The bond purchasers included B.J. Van Ingen & Company, Inc., James H. Causey & Company, Inc., and Schoellkopf, Hutton & Pomeroy, Inc. See also, “City Issues Terms of \$50,000,000 Loan,” *New York Times*, April 5, 1935, 37.

201 “Contracts for Parkway Bridge Let 4 Hours After City Approved Plan,” *New York Times*, June 15, 1935, 1.

202 See the series of ten photographs showing construction and views of the Henry Hudson Bridge, some courtesy of Steinman Engineers, some taken by Richard Averill Smith for Steinman Engineers, dated 6/18/36, 6/19/36, 6/26/36, 7/8/36, 8/7/36, at MTA Archives. Photographs also show the Spuyten Duyvil Swing Bridge.

203 “Henry Hudson Parkway Advances,” *New York Times*, December 8, 1935, XX12. See also, “Bids Asked June 14 on Inwood Bridge,” *New York Times*, May 21, 1935, 39.

204 Henry Hudson Parkway Authority, Henry Hudson Parkway, “Administration Building Plan, Elevations, Cross Section,” Contract No. 10, Sheet No. 2 of 15, Drawing No. XE-110 S6 102, no date, Olmsted Center.

the Bronx River Valley.²⁰⁵ It was a continuous open spandrel, concrete arch bridge of steel girder and floorbeam system, with a tied four-arch main span, measuring 122' long with a 51'-18" clearance elevation. It featured an ornamental metal railing atop a parapet, and abutments and battered walls with concrete louvered siding (although the original plans specified ashlar masonry).²⁰⁶ There were originally two plans for the Dyckman Street Bridge, one with stone cladding (Charles Schaefer & Son of Buffalo had the lowest bid of \$122,127.50) and one without (New York and New Jersey Engineering Corporation had the lowest bid of \$144,959).²⁰⁷ The girder bridge was added in 1938 for southbound traffic after the addition of another deck to the Hudson Bridge.

Henry Hudson Parkway, Dyckman Street to West 72nd Street

The section of the parkway between Dyckman Street and West 72nd Street was completed in October 1937. The parkway south from Dyckman Street extended from the Dyckman Street Bridge, traveled beneath the cliffs of Fort Tryon Park, and cantilevered over an open cut created the railroad tracks located between the parkway and the river. It then continued through Fort Washington Park to the George Washington Bridge interchange. At West 160th Street, the parkway ran westward to the river so that the roadway was between the shoreline and the tracks. At St. Clair Place where the railroad tracks entered the tunnel, the parkway hugged the shoreline for the rest of the way through Riverside Park, coming inland at West 96th Street and again around West 83rd Street to run above the railroad tracks to the West 79th Street traffic circle, before finally becoming the elevated West Side Highway at West 72nd Street. By January 1935, work had been completed on the parkway from West 72nd to 74th streets, with contracts let for the West 74th to 79th streets section. The parkway opened on October 12, 1937.²⁰⁸

Fort Tryon and Fort Washington Parks

The route through Fort Tryon and Washington parks offered some of the most dramatic scenery along the HHP. North of the George Washington Bridge, engineers took advantage of the old Riverside Drive extension and built northbound lanes of the parkway on the original Riverside Drive route between West 181st and Dyckman streets. The original Riverside Drive was itself an improvement of a pre-existing narrow and winding country road. Between 1924 and 1925, the city rebuilt Riverside Drive from West 165th Street to Dyckman Street. When completed, it was a lushly landscaped, 60' wide drive, newly graded and realigned into gentle curves appropriate for recreational automobile traffic. The drive also had a separate riverside promenade for pedestrians as well as a Greek temple-like shelter and comfort station built on a plateau 140' above the

205 Clarke, "Architecture of Short-Span Bridges," 230.

206 Henry Hudson Parkway Authority, "Dyckman Street Bridge: Architectural Elevations and Sections, Design 'A'," Drawing No. X 110 40-101, New York, June 1, 1935. The specifications, according to the *New York Times*, were a "reinforced concrete arch structure 120 feet long with a forty-foot clearance and wide enough to accommodate four lanes of traffic." See "Ten Bid on Park Bridge," *New York Times*, June 29, 1935, 5.

207 "Ten Bid on Park Bridge," 5.

208 "Riverside Plans Put Before City," *New York Times*, January 11, 1936, 17.

river. The parkway designers used stone for the parapets, rails and retaining walls.²⁰⁹ Cast iron stoplights are extant in the vicinity of Fort Tyron park.

When Robert Moses decided to build the parkway on top of Riverside Drive, he could be said to have been following the parkway ideal of working with the existing topography. The drive was obviously inadequate for handling the expected number of cars, so workers rebuilt it as a three-lane, northbound-only roadway, and constructed separate southbound lanes along the shoreline. The northbound and southbound lanes were at different elevation along the hillside. To accommodate the increased speed of travel, engineers employed the “spiral curve” in the design and alignment of the road through this section of the parkway. Railroads had used the spiral curve since the 1880s; it was a safety element that allowed railroad cars to transition from straight to curved sections of the tracks without derailling. Parkway designers used the spiral curve as an integral feature since it was both a safety precaution and an aesthetically pleasing design. One of the first parkway designers to use the spiral curve extensively was Wilbur H. Simonson, the landscape architect for the Mount Vernon Memorial Highway in Virginia (1927-32) (see HAER No. VA-42). The Henry Hudson Parkway was engineered for a travel speed of up to 35 mph; at that speed, the spirals helped provide a pleasurable visual connection to the surrounding environment, along with the kinetic experience of driving in both vertical and horizontal planes. Along this section of the parkway, the spiral curves helped direct and define the visual sequence of parkland, cliffs and Hudson River.

Riverside Park

The parkway through Riverside Park presented a different set of engineering challenges. The prominent features of this segment of the HHP were, of course, Riverside Park on one side, the Hudson River on the other, and in the background, the great urban metropolis. Engineers needed to cover the railroad tracks to West 125th Street and to integrate it into the park landscape. They had to run a six-lane highway through a narrow strip of land where space was already at a premium because of existing topography and the aforementioned New York Central railroad tracks, and they needed to provide adequate pedestrian tunnels under the parkway for access between the park and the shoreline.²¹⁰ Work crews created more land by extending the bulkhead and filling in along the shoreline an average of 75'. The frames enclosing the railroad tracks and creating the promenade were riveted steel girders measuring 76'-4" and resting on two piers. The pier at the east end was shorter since it sat on an already existing park wall, while the west pier was longer and anchored to a base at ground level. Both piers had bituminous waterproofing at the exterior. The interior right of way measured 66'.²¹¹

209 “To Open New Part of Riverside Drive,” *New York Times*, May 24, 1925.

210 For images of construction in Riverside Park, see for example “100th St, Progress on West Side Highway Looking North from 100th Street,” photo by Max Ulrich, 5/11/37, neg. no. 11587, Arsenal; “View South from 85th St Birds Eye,” 5/11/37, neg. no. 11583, Arsenal; “View North from 79th Street,” 5/11/37, neg. 11561, Arsenal.

211 For a typical section, see New York Central Railroad, “Elevation of Frames F5a, b, c: Roof Covering Over Tracks, W98th Street to W111th Street,” October 28, 1936, Drawing Nos. 84787, 84788, Olmsted Center.

Roofing over the tracks created a promenade, which had bluestone paving with bluestone and granite borders. In the center of a grassy median were grates measuring 15'-6" that provided ventilation for the structure below. The pedestrian paths were blacktopped. Sets of stairs periodically provided access to the recreational opportunities below.²¹² Built into the promenade walls were field houses and comfort stations, located at West 89th, West 101st, West 105th, and West 109th streets.

The estimated cost of construction of the parkway through Riverside Park was laid out in a 1936 memo from Robert Moses to the Board of Estimate and Apportionment. It was divided into eight sections; unfortunately, no references were given as to each section's location. Landscaping was estimated to cost \$783,000; boardwalk and piers at \$440,000; highway lighting at \$175,200; track covering at just over \$6 million; drainage at \$125,300; highway fencing at \$94,200; and reinforced concrete pavement at \$417,625, along with various other expenses like wall construction, bridges, and signs, for a grand total of nearly \$11 million.²¹³

Drawings of park structures reveal details of their design as well as the contractors in charge of construction. Charles Stumpf constructed traffic and direction signs that ranged from 2'-6" to 5'-3". Vulcan Rail and Construction Company built the "hairpin fence" (which was built of wrought iron rods) between West 72nd and 98th streets while North American Iron and Steel Company built the Art Deco style fence at West 161st to 165th streets. Other contractors involved in the construction included Duffy Construction Company, P.T. Cox Construction Company, Del Balso Construction Company, Poirier & McLane Corporation, Immick Company, and Walter Kidde Construction Inc. Hoffman & Elias, Inc. was in charge of most of the electrical work, while Bronx Water Works, Inc. installed water mains.

Henry Hudson Bridge, Addition

The final section of the parkway to be completed was the addition of the upper deck of the Henry Hudson Bridge. In July 1937, the *New York Times* reported that the Henry Hudson Parkway Authority received bids for grading the road through Inwood Hill Park to the upper deck of the Henry Hudson Bridge. A \$2 million bond would pay for the construction. The lowest bidder was Arthur Gallow, Inc. of the Bronx for \$207,607.50, followed by Louis DiMenna Contracting Company, Inc. of the Bronx for \$248,342.50, and finally Nicholas DiMenna & Sons, Inc. of the Bronx for \$327,165.²¹⁴

212 See "Architectural Plan of Track Covering 88th to 94th Street" and "Architectural Plan of Track Covering 82nd to 88th Street" part of New York Central Railroad, Roof Covering Tracks, West 82nd to West 94th Street, 5/27/36, Arsenal. See also "Architectural Plans of Track Covering W98th to W103rd" and "Architectural Plans of Track Covering West 103rd to 111th," part of New York Central Railroad, Roof Covering Tracks, West 98th to West 111th Street, 8/1/36, Olmsted Center.

213 "Detail Plans and Estimated Cost of Construction on the Park Department's Revised Plan for the West Side Improvement in Riverside Park," by Robert Moses to the Board of Estimate and Apportionment, January 3, 1936, Arsenal.

214 "Parkway Bids Received," *New York Times*, July 21, 1937, 17.

The bridge had been immediately popular from its opening day. As Robert Moses had predicted, drivers would rather pay the toll than face the bottleneck at the drawbridge at Broadway and West 220th Street. During the first four months of operation, the volume of traffic was such that instead of the anticipated 3,560,000 cars for 1937, the new estimate was now 4,800,000 with 7,350,000 cars projected for 1938.²¹⁵

Workers began construction of the new deck in September 1937. In addition, they also began widening the north and south approaches to the bridge. The original two-way approach through Inwood to the lower deck became southbound lanes only, and bridge crews built a new southbound-only crossing over Dyckman Street just west of the original two-way Dyckman Street Bridge. The Dyckman Street Bridge now carried three lanes of northbound parkway traffic over a new roadway through Inwood to the dedicated northbound upper deck of the Henry Hudson Bridge. Finally, between the Henry Hudson Bridge and West 239th Street in the Bronx, the crew widened the divided roadways from two to three lanes each.²¹⁶ A newspaper article from March 1937 noted that the widening of lanes would add new land for landscaping so that it would look more like a parkway and less like a boulevard.²¹⁷

In Inwood Hill Park, workers constructed two pedestrian tunnels (1936), one for each roadway of the Henry Hudson Parkway; these underpasses connected to existing footpaths in the park and were concrete arch deck bridges faced in ashlar masonry. Drawings of one of the underpasses showed stone masonry cladding with rock faced voussoirs. Along the east portal was a set of stairs with a wall of stone masonry and steps of bluestone flagging leading to a cinder path.²¹⁸ In conjunction with the New York Central Railroad, parkway workers also built a new steel girder and floorbeam 33' long footbridge (1938) over the tracks to provide access from the old section of the park to a new 15-acre area created between the railroad and the river by excavation fill from subway and building constructions. The plans for the bridge showed a stepped ramp with anti-slip treads in concrete on the east elevation and a flight of stairs with anti-slip treads on the west elevation. The plate girder bridge had a metal railing and stone masonry abutments. The east elevation also featured wing walls faced in stone masonry with a granite coping on the ramp walls.²¹⁹

215 Henry Hudson Parkway Authority, *Completion of the Henry Hudson Bridge and Henry Hudson Memorial Park Published on the Occasion of the Completion of the Henry Hudson Bridge and Approaches, May 7, 1938* (New York: Henry Hudson Parkway Authority, 1938).

216 "Widened Parkway to Speed Traffic," *New York Times*, September 2, 1937, 23. This article contains photographs of the parkway. One shows the upper level of the Henry Hudson Bridge from the Bronx and the other shows construction of the widened lanes. The timber light standards and guide rails, as well as masonry walls and curbs are apparent.

217 "Henry Hudson Span to Get Upper Deck," *New York Times*, March 27, 1937, 25.

218 Henry Hudson Parkway Authority, "Henry Hudson Parkway Paving & Underpass in Inwood Hill, Architectural Plan Elevations Sections & Details," Contract No. 16, Sheet 7 of 10, Drawing No. XE-110-1607, August 12, 1937, Olmsted Center.

219 Henry Hudson Parkway Authority, "Henry Hudson Parkway Overpass at Inwood Hill Park," Contract No. 24, 6 Sheets, Drawing Nos. XE-110-2401 through 2406, Olmsted Center; "Changes Planned at Inwood Hill Park," *New York Times*, January 27, 1938, 23.

On May 7, 1938, the completed Henry Hudson Bridge opened to the public with both Mayor LaGuardia and Moses taking part in opening ceremonies that celebrated not only the bridge's completion but also the completion of the approach spans and adjacent parks.²²⁰

Safety Features

As constructed, the parkway was a limited access, grade separated highway, and each 34' roadway had three lanes of reinforced concrete slabs. The maximum grade was 1 percent with a 2000' minimum radius of curvature and a 500' minimum vertical sight distance. Points of entry and exit were spaced far enough apart so as not to disturb the flow of traffic.

The parkway had cast concrete curbs, attached to the road by metal dowels, and medians.²²¹ There were guide rails at approaches, which varied depending on the "character" of the community through which the parkway passed. In the Riverside Park section, the approach guide rails were painted wrought iron fencing in a bold Art Deco arch pattern. There were typically no guide rails along the northbound roadway or in the median. However, along the southbound lanes that ran next to the shoreline, a flexible 4-strand cable tension guide rail was used that did not block drivers' views of the river and shoreline. North of the George Washington Bridge, there were stone retaining walls along the parkway that were remnants of the days when the road was still Riverside Drive. In the Bronx communities, timber guide rails prevailed; these were usually single or double railed and were placed on bridge parapets as well as along service roads, approaches, and in medians that divided the roadways under single-span bridges.²²² The timber guide rails were to be set back 2' from the curbs, with posts and railings of rough sawn California Redwood. The railings were to be pinned by 1 3/8" locust pins to the posts, which were 1'-11" tall.²²³ Timber guide rails with two railings instead of one were used on top of walls.²²⁴

As with guide rails, the plentiful lighting along the parkway varied with location. In Riverside Park, the luminaires were type "D" cast iron and bronze standards with elaborate Art Nouveau embellishments. The lanterns had glass windows and cast

220 "Henry Hudson Span Opens Upper Level," *New York Times*, May 8, 1938, 47.

221 Henry Hudson Parkway Authority, "Henry Hudson Parkway Grading and Paving, Henry Hudson Bridge to 239th Street, Paving and Grading Details," Contract No. 18, Sheet No. 5 of 9, Drawing No. XE 110 1805, September 16, 1937, Olmsted Center.

222 Henry Hudson Parkway historic photographs, MTA Archives, New York City, New York; also, photographs in Clarke, "Architecture of Short-Span Bridges," 230-233.

223 "Henry Hudson Parkway including Riverdale Avenue Bridges 1A, 2 & 2A," marked Unofficial, February 7, 1935 (although the date printed on the drawing is February 7, 1936), Sheet 5, Olmsted Center.

224 "Henry Hudson Parkway including Riverdale Avenue Bridges 1A, 2 & 2A," marked Unofficial, February 7, 1936, Sheet 12, Olmsted Center.

aluminum domes with a decorative finial on top.²²⁵ On the Henry Hudson Bridge, the lights were located on the sides of the roadway and were sleek, single-armed steel standards that carried General Electric “Novalda” lamps. The 21’-4 1/2” tall standards were to be set in concrete and had a steel shaft with cast iron grooved caps at the top of the shaft and ends of the cross arms. The cross arm of the standards featured a bracket.²²⁶ In Inwood Hill and the Bronx, parkway luminaires had single or twin light pendants hung from cross arms mounted on timber posts; these standards were similar to the ones used on the Bronx River Parkway. The cedar light standards were to be built of Western Red Cedar with a rough sawn finish. The 27’-7” standards had chamfered corners and ends. The cross arm had a bracket support, which was attached by an oak peg.²²⁷ The twin lights were typically placed in the planted medians. Along the service roads, however, the lights were the ornate single mast “Corvington” standards. These were cast with a globe light hanging from a cross arm supported by a bracket.²²⁸ The installation of lighting facilitated the use of the parkway at night, something the *New York Times* stated would be appreciated by those going home from an evening in the city.²²⁹

In the mid-1930s, there were few safety standards in place, although the National Park Service with the Bureau of Public Roads was developing standards for national park roads. Moses and his engineers developed standards that would become the baseline for road construction. By 1941, there was a standard textbook available by Lawrence Hewes entitled *American Highway Practice* that outlined safety features for roads, such as turnouts at intervals long enough to provide for safe acceleration and deceleration.²³⁰ The HHP’s safety features may be lacking by today’s standards, but it was a prototype of urban parkway construction at the time of its establishment. The acceleration and deceleration lanes were indeed short, but perhaps appropriate for the expected travel speed on the parkway. There were no emergency turnouts or shoulders, but turnouts were added later at regular intervals through Riverside Park.

One example of how parkway officials dealt with the issue of safety can be seen in correspondence from 1939. The General Superintendent, at the request of Moses, responded to a private citizen named John L. Miller who had suggested constructing

225 Parkway light standard from “Express Highway Viaduct: St. Claire Place to W135th Street, New York City, Lighting Standards for Highway Lighting Type ‘D’,” New York, 1937; for photograph, see X-110, M-71, neg. no. 22225, March 22, 1943 and X-110, M-71, neg. no. 28613, October 29, 1955, Olmsted Center.

226 Henry Hudson Parkway Authority, “Electric Lighting System, Henry Hudson Bridge Lighting, Division No. 2, Bridge Light Standard Details,” Contract No. 11, Sheet No. 24 of 30, Drawing No. XE-110-350 to N55 124, Olmsted Center. Contract No. 11 is the lighting plan for the Henry Hudson Parkway.

227 Henry Hudson Parkway Authority, “Henry Hudson Parkway Electric Lighting System, Henry Hudson Parkway Lighting, Division No. 1, Cedar Light Standard,” Contract No. 11, Drawing No. 4 of 30, Drawing No. XE-110-350 to N55 104, Olmsted Center.

228 See photograph showing standard, “Taken from HH Parkway Looking East,” Block No. 37078, Lot No. 900, Map No. 36, MTA Archives. The two types of standards can be seen in “Taken from East Sidewalk Looking North,” Block No. 3408D, Lot No. 122, Map No. 51, MTA Archives.

229 “New Local Roads Open,” *New York Times*, December 26, 1937, 132.

230 Hewes, *American Highway Practice*, 71.

turnouts every 500' along the parkway for disabled vehicles. He pointed out that there was no way there could ever be enough turnouts since traveling any distance on a blown out tire was dangerous. Secondly, having a continuous center island in the median made doing repairs on the left side of the vehicle less dangerous. Finally, the parkway contracted with emergency service vehicles to tow away disabled cars.²³¹

Landscaping

On opening day, the *New York Times* described the Henry Hudson Parkway as “the most extensive alteration of Manhattan’s topography in recent history.”²³² This was not too much of an exaggeration. The architects and engineers had designed the parkway to take advantage of many unique and scenic views along the Hudson River, but in some sections, they also designed the land to accommodate the parkway. Riverside Park was the most prominent example of the man made landscape. Workers built the parkway along the shoreline on manmade fill and completely covered the railroad tracks. They then contoured the landfill into a synthetic topography that complemented the park’s new gardens, promenades, buildings and recreational areas, all of which landscape architects created to present pleasing views both to the passing motorist as well to the park user. The drive through the park thus offered competing visions of the “natural”: the Hudson River (although after a few hundred years of usage, how “natural” it remained was debatable), and Riverside Park, representing Nature improved by Man.

The landscaping along the parkway and in Riverside Park was carefully planned to be natural and enhance the park-like setting, with a wide variety of trees, shrubs, vines and grasses needed for the new and existing sections of Riverside Park, as well as for the roadside, medians, and slope protection areas along the rest of the parkway. Where trees had been removed for the parkway construction, new saplings and trees were replanted both for roadside beautification and to prevent soil erosion; these plantings also helped screen homes along the parkway from fumes and debris. Climbing vines on median guardrails helped reduce headlight glare, while vegetation on rocky outcrops stabilized the slopes and prevented rockslides.

In Riverside Park, Supervising Landscape Architect Gilmore D. Clarke helped develop naturalistic planting plans incorporating new trees, shrubs and ground cover with already existing trees that complemented park structures and the topography. Most of the original plantings are now gone. From West 72nd to West 78th streets, the vegetation was somewhat different from that of the rest of the park, incorporating more evergreens (such as English, Pacific, and Japanese yews) and different trees than used elsewhere (such as European beech, ginkgoes, tulip poplars, Oriental plane trees, bald cypress and various linden species). Elmhurst Contracting Company Inc. performed the work in this section.²³³ The plans for the remainder of Riverside Park from West 78th to 158th streets

231 Letter, General Superintendent to John L. Miller, November 13, 1939, Box 102429, F33, Municipal Archives, New York City.

232 Bernstein, “West Side Highway to Open,” np.

233 These planting plans date to 1936. The listings have Latin names only. Trees: *Acer rubrum*, *Fagus sylvatica*, *Ginkgo biloba*, *Gleditsia triacanthos*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Pinus*

showed Norway maples, various kinds of thorn trees, honey locusts, sweetgums, various crabapples (carmine, flowering, Siberian, and Sargent), oaks (scarlet, pin and Northern), European mountain ash, and American elms. The contractor was Roman Landscape Contracting Company Inc. The shrubs used in the park were both flowering and nonflowering. Forsythia, honeysuckle, roses, and lilacs provided shots of color while the English yew provided year round green. Groundcover in the park included ivy, vinca, and trailing roses. Several of the plants used in the planting plans are now considered invasive, including English ivy, Morrows and Tatarian honeysuckle, baby rose and Japanese barberry.²³⁴

The Government of the Netherlands offered as a gift to the City of New York over 1 million tulips and 100,000 hyacinths in 1939 since the Worlds Fair for which they were intended would not start until May, after their blooming time. The tulips were slated for planting along West 83rd and 91st streets on two long terraces. The hyacinths were to be planted at West 105th and 106th streets in a semi-circular area. The chosen sites were pedestrian-friendly, allowing passersby to “have a close view of the flower beds” so they could study the varieties at leisure. There are also elevated paths and terraces immediately above these plantings which command a perfect view of the entire expanse.”²³⁵

nigra, *Pinus sylvestris*, *Platanus orientalis*, *Populus bolleana*, *Quercus coccinea*, *Quercus palustris*, *Quercus rubra*, *Taxodium distichium*, *Tilia cordata*, *Tilia tomentosa*, *Tilia vulgaris*. Small trees: *Betula populifolia*, *Carpinus betulis*, *Crataegus cordata*, *Crataegus crusgalli*, *Crataegus nitida*, *Crataegus prunifolia*, *Magnolia soulangeana*, *Malus coronaria*, *Malus floribunda*. Evergreen shrubs: *Taxus baccata rependens*, *Taxus brevifolia*, *Taxus cuspidate*, *Taxus media*. Deciduous shrubs: *Elaeagnus anugstifolia*, *Ligustrum regelianum*, *Lonicera morrowi*, *Rhus canadensis*, *Vaccinium corymbosum*, *Virburnum prunifolium*. See New York Central Railroad, “Express Highway & Track Covering Landscaping Between West 72nd Street and West 78th Street, Landscaping,” Olmsted Center. 234 New York Central Railroad, Landscaping in Riverside Park, Between W 83rd & W 100th Street New York City, “Planting Plan 83rd–86th St” and “Planting Plan 86th St-92nd St,” April 3, 1937; New York Central Railroad, Landscaping in Riverside Park, Between W 100th Street & St. Clair Place New York City, “Planting Plan W 100th St to W 106th St,” “Planting Plan W 105th St to W 113th St,” “Planting Plan W 120th St to St. Clair Place, West of Riverside Drive,” and “Planting Plan, W 122nd to St. Clair Place, East of Riverside Drive,” October 18, 1937; New York Central Railroad, Landscaping in Riverside Drive W 135th St to Dyckman St, New York City, “Planting Plan W 135th St to W 158th St,” “Planting Plan, W 158th St to George Washington Bridge,” “Planting Plan, George Washington Bridge to Dyckman St,” September 13, 1937. All available at Olmsted Center. Plant lists are all in Latin. Trees: *Acer platanoides*, *Carpinus betulis*, *Cercidiphyllum japonicum*, *Crataegus cordata*, *Crataegus crusgalli*, *Crataegus oxyacantha*, *Gleditsia trachanthos*, *Luquidambar styraciflua*, *Malus arnoldiana*, *Malus alrosanguinea*, *Malus baccata*, *Malus floribunda*, *Malus sargentii*, *Quercus coccinea*, *Quercus palustris*, *Quercus rubra*, *Sorbus aucuparia*, *Tilia cordata*, *Ulmus Americana*. Shrubs: *Berberis thunbergii*, *Cornus paniculata*, *Diervilla sessilifolia*, *Diervilla trifida*, *Elaeagnus longipes*, *Forsythia fortunei*, *Forsythia interspectabili*, *Forsythia suspense*, *Ligustrum ibota*, *Lonicera morrow*, *Lonicera tatarica*, *Kolkwitzia amabilis*, *Rosa humilis*, *Rosa multiflora*, *Rosa nitida*, *Rosa lucida*, *Rosa setigera*, *Syringa vulgaris*, *Taxus baccata repandens*, *Viburnum cassinoides*. Vines/groundcover: *Ampelopsis lowi*, *Ampelopsis veitchi*, *Hedera helix*, *Lonicera halliana*, *Lycium chinense*, *Rosa wichuraiana*, *Rosa hiawatha*, *Rosa max Graf*, *Rosa evangeline*, *Vinca minor*. 235 Press Release, Thursday, November 30, 1939, Department of Parks, Arsenal, Central Park, located in Box 102429, F69, Municipal Archives.

Some of the plantings along the HHP were purposely placed to be pedestrian deterrents, such as those between West 85th and 92nd streets. Allyn R. Jennings, General Superintendent, directed William Latham in a 1939 memo:

Don't forget to transplant some fair sized thorny plants, such as hawthorn, aralia or barberry, to a few selected places between the west curb of the southbound driveway on the Henry Hudson Parkway and the sea wall fence, at the locations where pedestrians are walking along this strip. You should also figure on putting some out-rigger spikes on the outside of the wall so that where planting prevents walking on the inside, the tendency will not be to cross the fence and continue along the coping of sea wall.²³⁶

By June, the work was slated for completion.²³⁷

The parkway plantings used many of the same plants used in Riverside Park. The plantings were indicated on detailed plans, which unfortunately have been divided by stations, so the exact locations are not known except that they were somewhere in the Bronx. From Sta. 17 to Sta. 6 + 34 plantings were added to the already existing trees and rock outcroppings. Along the west side of the parkway ran a timber guide rail. Trees included flowering dogwoods, scarlet and northern red oaks, and gray birches. In the vicinity of a police station on the east side of the parkway, a bed containing ten Carolina hemlocks, Boston ivy and English ivy, fifty-four flowering dogwoods, and 500 black huckleberry shrubs was specified.²³⁸

Along both sides of the parkway from Sta. 18 to Sta. 35 + 65 were 2-3' maple leaf arrowroots, American ivy, 5-10' flowering dogwoods, 3-4' smooth sumacs, honeysuckle, 6-10' gray birches, 2-4" scarlet oaks and 2-3" northern red oaks, 5-10' Canadian hemlocks and 1-2' black huckleberries. The plans specified "Where two or more kinds of shrubs are grouped in some general area, the smaller size plant should predominate in the foreground. Where more than one kind of vine is indicated for the guard rail, they should be irregularly grouped and spaced as suggested by a representative of the planting department."²³⁹ This indicates the concern to create naturalistic plantings rather than a formal appearance. The timber guide rail in this section ran along only the west edge of the parkway, and there was a fence along the railroad tracks.

Continuing up the parkway, the next section included Dyckman Street and ran from Sta. 33 + 65 to Sta. 51 + 0. The southern part of this section featured 2-3' maple leaf

236 Memo from Allyn R. Jennings, General Superintendent to William H. Latham, March 8, 1939, Box 10249, F69, Municipal Archives.

237 Memo from K.S. Franklin to W.H. Latham, June 7, 1939, Box 102429, F69, Municipal Archives.

238 Henry Hudson Parkway, Boro of Manhattan, "Planting Plan Sta. 17 to Sta. 6 + 34," Sheet No. 3 of 16, Drawing No. X-L-110-127, Issued September 24, 1936 and April 1, 1936, Olmsted Center.

239 Henry Hudson Parkway, Boro of Manhattan, "Planting Plan Sta. 18 to Sta. 33 + 65," Sheet 2 of 16, Drawing No. X-L-110-113, Issued September 25 and March 31, 1936, Olmsted Center.

arrowroots, “shining roses” (a shrub rose with pink flowers), Northern red oaks and 8-10’ flowering dogwoods in the median between the west edge of the parkway and a road passing under the parkway. Along the west edge of the parkway between the timber guide rail and the wall along the railroad tracks were plantings of Northern red oaks, flowering and gray dogwoods, various types of ivy, roses, tulip poplars, and gray birches. On the east side of the parkway along the ramps and Dyckman Street, scattered among the rocky outcroppings were plantings of Northern red oaks, scarlet oaks, and flowering dogwoods, in addition to other shrubs and vines. In this section, all “ailanthus, fruit trees and cultivated flowering shrubs” were to be removed in favor of a naturalistic landscaping.²⁴⁰ From the Harlem River to Kappock Street, there were fewer plantings. Around Spuyten Duyvil and Johnson Avenue, the plans specified twenty-five 8-10’ Carolina hemlocks, forty-three 8-10’ tulip poplars, and eight 3-year-old Japanese ivy plants. The western edge of the parkway was to have scarlet oaks (five 8-10’, three 10-12’, three 2-3”, one 3-4”, and three 5-6”), red oaks (one 3-4” and two 5-6”) and flowering dogwoods (four 8-10’). At the base of a wall running along Kappock Street on the west side of the parkway were fifteen Japanese ivy plants. On the east side of the parkway among rocky outcroppings, were flowering dogwoods (four at 8-10’), scarlet oaks (two 2-3”, and 3 3-4”), and red oaks (one at 3-4” and 3 at 5-6”). Along the ramp at Kappock Street were vines, roses, and Chinese bittersweet, in addition to flowering dogwoods and scarlet oaks. The plan preserved several existing trees, including maples, a 30’ elm on the east side of the parkway, a locust on the west side, and near Kappock Street, a grouping of birch, cherry, maples and a catalpa. A timber guide rail ran along both sides of the parkway.²⁴¹

From Sta. 31 to Sta. 46 + 85, which was in the Bronx and included West 232nd and 235th streets, the trees to be planted were confined to red and scarlet oaks with a number of existing trees maintained. In addition to double light standards in the center median and single light standards along the edges placed to illuminate the road at regular intervals, the parkway also featured plantings in the medians between the parkway and service roads and between the north and southbound lanes of the parkway. In the median between the west service road and parkway, the plans specified ivy, Chinese trumpet creeper, and 1900 honeysuckle plants. The center median between the parkway lanes had nearly 500 shrubs. Finally, the median on the east side of the parkway along the east service road had the same plants as the west.²⁴²

In the Bronx, from Sta. RS 473 to Sta. C484, trees planted included red maples, American hornbeams, flowering and cherry dogwoods, pin and red oaks, and sweet and black gums. Numerous trees were saved, such as maples, tulip poplars, and oaks. There

240 Henry Hudson Parkway, Boro of Manhattan, “Planting Plan Sta. 33 + 65 to Sta. 51 + 0,” Sheet No. 1 of 16, Drawing No. X-L-110-114, Issued September 24, 1936, August 25, 1936, April 4, 1936, and March 21, 1936, Olmsted Center.

241 Henry Hudson Parkway, “Harlem River to Kappock Street-Bronx, Planting Plan,” Sheet No. 4 of 16, Drawing No. X-L-110-116, Issued September 24, 1936 and March 24, 1936, Olmsted Center.

242 Henry Hudson Parkway, “Bet. Sta. 31 + 0 and 46 + 85-Bronx, Planting Plan,” Sheet No. 6 of 16, Drawing No. X-L-110-118, Issued September 25, 1936 and March 25, 1936, Olmsted Center.

are also plans for beds of plantings, such as one containing 1000 purple loosestrife (now considered invasive) and 250 rose mallow hibiscus and another featuring 1400 ivy plants and 1300 Japanese honeysuckle.²⁴³

For much of the parkway, the scenery was part of a free-flowing, kinetic experience. The car was the primary mediator of the driver's sensory experience of the environment—an endless succession of visual flashes framed by windshields, side windows and mirrors. The parkway did not feature scenic overlooks where drivers could stop and examine a particularly picturesque vista. Rather, the parkway connected the scenic landscape along the Hudson shoreline and provided access to various recreational opportunities. The road itself was an important visual component.²⁴⁴ Engineering concerns such as road geometry, line of sight, grading, and alignments were crucial safety concerns as well as determining the visual appeal of the roadway from the driver's viewpoint. Thus, the straightaways, broad sweeps, and curves of the lanes made the parkway a concrete ribbon, experienced in time and space.

Signage

Moses was reluctant to have signage placed on the parkway, stating “we have enough signs already on them.”²⁴⁵ An example of this reluctance is seen in his refusal to “have route numbers conforming with the Federal highway numbering system placed on the parkways of the city.” He was a firm opponent of signage along roadways, “I am sick of seeing our heritages of beautiful scenery and our public improvements endangered, depreciated and in many cases destroyed by outdoor advertising interests.”²⁴⁶ Any signs along the parkway were unobtrusive, made so by being constructed of wood, sitting low to the ground, and small in size.²⁴⁷ In April 1938, the *New York Times* reported that numbered exit signs had been installed on the HHP, starting with exit 1 at West 72nd Street and ending with exit 19 at Mosholu Parkway.²⁴⁸ Madigan-Hyland had the contract to fabricate and erect the reflecterized signs along the parkway from West 72nd Street to Dyckman Street.²⁴⁹

The type of signage was strictly regulated, as evidenced in letters from various groups requesting signs be erected along the parkway. In response to a Mr. Ned Stevenson

243 Henry Hudson Parkway, Bronx, Planting Plan from Station RS 473 to Station C484, Sheet No. 15, Drawing No. X-L-110-123, Issued March 26, 1936, the Olmsted Center.

244 Christopher Tunnard and Boris Pushkarev, *Man-made America: Chaos or Control?* (New Haven and London: Yale University Press, 1963), 170.

245 “Moses Ban on Road Numbers,” *New York Times*, May 3, 1939, 3. Russell E. Singer, general manager of the American Automobile Association denounced Moses' refusal as “blunder of major proportions” because it would not aid visitors to the World's Fair. As an example, he noted that Moses did not want the HHP labeled as Route 9-A, so that instead, “we must tell him [the motorist] to take the West Side Express Highway, then the Henry Hudson Parkway, then the Saw Mill River Parkway, then the Bronx River Parkway Extension, the Eastern State Parkway and Route 55.”

246 Moses, *Public Works: A Dangerous Trade*, 150.

247 For an example, see “Henry Hudson Parkway at 158th Street,” nd, MTA Archives.

248 “Signs Numbering Exits Installed on Parkways,” *New York Times*, April 24, 1938, 26.

249 Letter from James A. Dawson to Allyn R. Jennings, Municipal Archives.

asking for signs to be posted marking the exit of the Riverdale Country School, the general superintendent responded that it was “absolutely out of [the] question to permit the erection of a sign....It would break down a department regulation prohibiting such signs and it would establish a dangerous precedent which would result in all sorts of requests from any number of establishments....I am sure you would not want to see the parkway so decorated.”²⁵⁰ Even the police department’s signs were scrutinized for acceptability. In 1939, the police department sent blueprints showing the placement of two signs at West 72nd Street on the center median. The signs, to be placed on street lights, were: “to read ‘SHARP CURVE’ and are to have two bull’s eyes contained in a box on the upper portion of this unit which will have two amber lenses and which will burn on street lighting schedule....The units will be painted black and the lettering will be white.”²⁵¹ The response from the Department of Parks was that they had usually prohibited the hanging of police signs, characterized as “hideous and often inefficient.” Furthermore, the example provided by the police in their current request was criticized as being inefficient, bad design, and “in direct contrast with our existing signs and structures.” The Parks Department decided to allow the signs to be put up temporarily due to the many accidents that had occurred at that location until more suitable signs conforming to the park’s standards could be fabricated.²⁵²

The HHP, like other parkways, had no billboards along the roadside to distract the driver or ruin the scenery. Billboards could only be banned outright on parkway right-of-ways, so they could be erected in Harlem because that section of right-of-way was left zoned for commercial use. In 1982, Washington Heights residents became embroiled in a dispute over a large “Lucky Strike” advertisement placed along the parkway at West 158th Street, as well as similar ones at West 145th.²⁵³ Both of the billboards were on land owned by Conrail, successor to the New York Central Railroad. The community lost the dispute. The stretch of HHP between St. Clair Place north through Harlem is now packed with billboards, including a Fairway Market electronic variable message sign. Too many signs and billboards create a visual chaos far removed from the original intent and experience of the parkway.²⁵⁴

Additions to the Parkway

As use of the parkway increased and time passed, the parkway underwent alteration and rehabilitation. In 1938, three southbound lanes for the HHP were opened between West

250 Letter from Ned to Mr. James Rippen, November 6, 1939, and letter from General Superintendent to Mr. Ned Stevenson, November 10, 1939, both in Box 102429, F82, Municipal Archives.

251 Letter from Thos. W. Rochester, Chief Engineer, to Mr. Kenneth S. Franklin, Boro Director, Department of Parks, September 7, 1939, Box 102429, F82, Municipal Archives.

252 Memo from James A. Dawson to William H. Latham, re: Henry Hudson Parkway Signs, Police Signs at 72nd Street, November 13, 1939, Box 102429, F82, Municipal Archives.

253 William G. Blair, “Washington Heights Frustrated by a Billboard,” *New York Times*, November 3, 1982, B1.

254 For discussion of safety issues related to electronic billboards, see for example, Brendan Wallace, “Driver Distraction by Advertising: Genuine Risk or Urban Myth?” *Municipal Engineers* 156, no. ME3 (2003): 185-190.

105th and 121st streets, which had been the scene of bottlenecks since it had previously only been a four-lane road. The work also included repaving the West 125th Street ramp. The new section cost \$195,000 to construct.²⁵⁵

The Port Authority of New York announced in March 1939 that a “comparatively short strip of roadway will be constructed in Fort Washington Park, opposite West 169th Street” to connect the HHP with the George Washington Bridge. The approach was for northbound traffic on the parkway to access the bridge and was to be completed by July 4, although it actually opened later in the month.²⁵⁶

Rockslides were a source of worry for public works personnel. In January and February 1939, the area between the Spuyten Duyvil Parkway and West 246th Street caused concern. The park director, James A. Dawson, wrote to William Latham: “the entire outcrop, the section above the Service road and the section between the Service road and the Parkway, is honey-combed with cracks, and many of the boulders are in danger of falling on the Service road and the Parkway. This condition will become aggravated by frost action.” Dawson recommended constructing a retaining wall on the east side of the parkway and to cut the outcrop back.²⁵⁷ Rock was also blamed for causing cracks in the roadbed as well as causing the expansion material to squeeze out of the expansion joints.²⁵⁸

The lack of emergency turnouts on the parkway was addressed in 1947 when Charles H. Sells, State Superintendent of Public Works announced that Del Balso Construction Corporation would construct twenty-six emergency turnouts along the parkway between the George Washington Bridge and West 72nd Street. The turnouts were described: “Seven will be slightly smaller than the other nineteen, otherwise, each ‘turn-out’ will be 155 feet long. At the center of each one there will be a safe area eighteen feet wide by seventy feet long separated from the outer lane of the parkway by a curb two feet in width.”²⁵⁹ In Riverside Park, for example, turnouts were paved with blocks and separated from the parkway by a low block median. A sign announced that the turnout was to be used “For Emergency Repairs Only.”²⁶⁰

255 “3 New Lanes Opened on Hudson Parkway,” *New York Times*, November 18, 1938, 23.

256 “New Road is Planned to Washington Span,” *New York Times*, March 27, 1939, 31; “New Approach to Bridge,” *New York Times*, April 2, 1939, 146; “New Drive Link to Open,” *New York Times*, July 27, 1939, 16; George M. Mathieu, “City’s Improved Exits Ready,” *New York Times*, July 23, 1939, XX1.

257 Memo from James A. Dawson, Park Director, to William H. Latham, re: Rock Outcrop, Henry Hudson Parkway, bet. Spuyten Duyvil Parkway and 246th Street, Bronx, January 23, 1939, Box 102429, F79, Municipal Archives.

258 See Letter from James A. Dawson, Park Director in charge of design to Mr. J.J. Darcy, District Engineer, Division of Highways, State Department of Public Works, February 3, 1939, and memo from G.L. Quigley, Borough Director, Bronx to W.H. Latham, Subject: Paving Henry Hudson Parkway—Bronx, February 8, 1939, both in Box 1024929, F79, Municipal Archives.

259 “Plans Safety ‘Turn-Outs’,” *New York Times*, February 29, 1948, 41.

260 Series of six photographs showing emergency pull outs at northbound West 83rd Street, northbound West 88th Street, two of southbound West 90th Street, northbound West 105th Street, and southbound West 125th Street, from Metropolitan Transit Authority Bridges and Tunnels Archives.

The parkway underwent repaving at various times. One instance was in 1951 when short discontinuous sections of the parkway were chosen for repaving at a total cost of \$250,000. In March, the foundation was repaved between West 72nd and 82nd streets, and the whole section was repaired. In August, the section between West 95th and 98th streets was repaved. The southbound lanes of the parkway between West 165th and Dyckman Street were slated for repaving in 1982 at a cost of \$28 million.²⁶¹

In 1955, the City Planning Commission approved plans for a pedestrian overpass at West 235th and 236th streets that would cross both the parkway and service roads. The Board of Estimate, on the other hand, supported and approved a design for the overpass that only crossed the parkway.²⁶² Citizens of Riverdale and the Planning Commission had argued that the shorter overpass would not provide protection for school children and other residents of the apartment buildings that lined the parkway.

In 1972, the busiest parts of the HHP handled more than 130,000 cars daily, and it was consequently in need of repair.²⁶³ A major rehabilitation of the section between West 72nd and 81st streets took place in 1975. The \$10.6 million project undertaken by the Karl Koch Erecting Company of Carteret, New Jersey, involved “new steel sections under the roadway, cleaning and painting of the retained steel, a reinforced concrete pavement of the same width as the original six lanes, and barriers both in the median and along the edge of the park.” The deterioration of this section was blamed on salt use on the road during the winter. Residents, meanwhile, had complained about the detouring of traffic through local streets and the long time the city took to begin work.²⁶⁴ In order to assuage residents, a green plywood fence closed off the construction area from the park with gas-powered “buggies” carrying concrete to the sections to be paved. The second part of this operation involved rehabilitating the West 96th Street interchange.²⁶⁵

A \$45 million rehabilitation, scheduled to begin in 1978 and end in 1983, included construction of a median barrier, guiderails and ramps.²⁶⁶ In Riverdale, a proposed \$11 million rehabilitation of the parkway in 1979 led to protests from the community over the destruction of trees and an increase in traffic. The plans had specified repaving, reducing the parkway to four lanes, installing a concrete median barrier, and widening and lengthening several exits. The proposal reduced the number of lanes in each direction from three to two, widened the remaining lanes, and added acceleration and deceleration lanes at every entrance and exit. While community leaders initially supported the project, residents soon began to protest the work when they saw how many trees were slated for destruction and the alteration that would occur to the landscaping. The result was a three-

261 The Associated Press, “Hudson Parkway Gets \$22 Million,” *New York Times*, August 27, 1982, B8.

262 “Overpass Pressed,” *New York Times*, February 6, 1955, 61.

263 Between West 143rd and 147th streets, daily northbound traffic totaled more than 60,000 cars. Robert Lindsey, “West Side Highway Repairs and Jams,” *New York Times*, August 8, 1972, 35.

264 Edward C. Burke, “Work to Resume on Parkway Here,” *New York Times*, August 29, 1978, 41.

265 Edward C. Burke, “City to Rebuild Part of Hudson Parkway,” *New York Times*, June 1, 1976, 1.

266 Edwin McDowell, “Project Announced for Hudson Parkway,” *New York Times*, March 10, 1978, D11.

week stop work and negotiations between the two groups, ending in a compromise on the number of trees destroyed and additional trees planted, the installation of fences to keep children from crossing the parkway, rerouting some exits and turnarounds to preserve vegetation, and installing drainage features. While the board accepted the proposal, there were some provisions, including: “a 30-day environmental study, an examination of the safety of the 239th Street exit and cooperation of the Department of Transportation in an effort to reduce the size of signs.”²⁶⁷

Starting in the 1950s, bridge crews performed a series of structural repairs to the Henry Hudson Bridge and its towers; the MTA recently completed a major rehabilitation of the bridge (under the supervision of Steinman, Boynton, Gronquist and Birdsall, the current incarnation of the original Robinson & Steinman engineering firm) that reconfigured the lower deck toll plaza, and replaced the entire upper deck. In 2003, the Metropolitan Transit Authority (MTA) also finished its overhaul of the Dyckman Street Bridge.

In the mid-1980s, the Riverside Drive viaduct, crossing over Twelfth Avenue between West 125th and 135th streets, had to be rehabilitated due to corrosion.²⁶⁸

HENRY HUDSON PARKWAY IN USE

The Completed Parkway

The Henry Hudson Parkway officially opened on October 12, 1937. Mayor Fiorello H. LaGuardia noted the HHP opening was “an important event in the history of the city” and praised its combination of utility and beauty.²⁶⁹ The opening day commemorative booklet contained a page of “Facts, Figures, and Finances” for the parkway section between West 72nd and Dyckman streets: 3 million cubic yards of fill, contained by a riprap seawall constructed from 1,250,000 cubic yards of stone; 262,000 cubic yards of concrete and 16.8 million pounds of reinforcing steel for parkway pavement; 12,500 cubic yards of stone masonry and 1,600 cubic yards of granite to trim the masonry; 13,000 trees and 350,000 shrubs of various kinds for the landscaping; and 132 total acres added as the result of fill and covering the railroad tracks.²⁷⁰ The statistics as well as the scope of the project were staggering.

267 David E. Sanger, “Work on Henry Hudson Begins,” *New York Times*, July 29, 1979, WC1; Hilary Hinds Kitasei, Chair, Henry Hudson Parkway Task Force, Riverdale Nature Preservancy, provided additional information. Additional research needs to be done on the parkway through the Bronx. Other potential sources of information include: *Riverdale Press*, Friends of Van Cortlandt Park, and the Bronx Historical Society.

268 Joseph Berger, “Viaduct Opened on Riverside Dr. Two Days Late,” *New York Times*, November 10, 1984, 27; Suzanne Daley, “Rebuilding the Riverside Drive Viaduct,” *New York Times*, May 22, 1985, B1.

269 Statement of Fiorello LaGuardia, *Opening of the Henry Hudson Parkway*, 13-14. For photos of Robert Moses at the Rotunda on opening day, see “Robert Moses Opening Ceremony, 79th St Rotunda,” neg. no. 12870, 10/12/37, Arsenal.

270 “Facts, Features and Finances,” in *West Side Improvement*, 20.

Each section of the project had presented its own unique topographic, scenic and community features; hence highway structures, alignments, landscaping and architectural detailing varied from section to section. Moses could have decided on one standard for the entire parkway, but his choice of Gilmore Clarke as landscape architect demonstrated his commitment to a parkway vision that, to a certain extent, respected the surrounding environment. Ignoring the defining characteristic of the individual communities would have created discordance for the traveler; therefore, the parkway was built to “follow the land,” and this decision ultimately created a unified aesthetic experience for the driver that was also visually stimulating.

The Reaction

As wonderful as the driving public had expected the parkway to be, it proved almost immediately inadequate as an urban arterial, according to Robert Caro in *The Power Broker*. “Motorists launching gaily into the lovely new parkway have been appalled to find that not all traffic problems have been solved,” the *New York Times* reported.²⁷¹ While the parkway in theory made the trip to Manhattan from the northern suburbs much shorter, twenty-six minutes versus the sixty-eight it originally took using city streets, the sheer number of motorists made this purportedly short trip much longer.²⁷² An editorial in the *New York Times* noted the complaints by motorists that the parkway was jammed with sightseers: “The parkway was too new, too lovely, had come too full-blown from the hand of Mr. Robert Moses, had received too much attention in the public print. The result was that practically every citizen with something on wheels propelled by a gasoline engine took the first opportunity to try out the new thoroughfare.” The editorial cautioned those who complained, however, to remember the old route.²⁷³ The traffic on the parkway could make the trip take as long as seventy-three minutes. Meanwhile, on Riverside Drive at rush hour, the congestion was just as heavy as it had been before the parkway was built, although residents who lived along the drive no longer had to contend with the noise and fumes of the railroad. Thus, there were now two congested routes on the West Side: the new parkway and the old Riverside Drive. The story was the same for the Henry Hudson Bridge. Despite the addition of the new upper deck, it could not accommodate all the traffic traversing the bridge. Vehicular use continued to climb, the toll lines were long, and the traffic at the old Broadway bridge seemed as bad as ever.²⁷⁴

Despite complaints about the traffic, the response to the new parkway was generally favorable. Praise was given for the parkway’s role as a “through express route” that made for an uninterrupted drive from Canal Street nearly to Poughkeepsie via the Saw Mill River and Taconic State parkways.²⁷⁵ The press further lauded the beautiful scenery, the landscaping, and the new recreational amenities. The *Daily News* called it “the most beautiful drive in the world,” while the *Journal-American* rhapsodized that it was “a veritable motorist’s dream” as well as “a fountain of health and pleasure from

²⁷¹ *New York Times* quoted in Caro, *The Power Broker*, 563.

²⁷² Henry Hudson Parkway Authority, “Completion of the Henry Hudson Parkway,” np.

²⁷³ “Nevertheless, It Moves,” *New York Times*, November 2, 1937, 24.

²⁷⁴ Caro, *The Power Broker*, 563-64.

²⁷⁵ Victor H. Bernstein, “West Side Highway to Open,” *New York Times*, October 10, 1937, 187.

which New York's people and their children and guests will be drinking long years to come."²⁷⁶ The *New York Times* noted approvingly, "always the man in the car has the river in full view."²⁷⁷ If there was criticism that the man on foot no longer had access because the parkway stood between him and the Hudson, Robert Moses had the perfect retort, "the average park visitor wants a view of the water. He does not want to dabble in the Hudson's mighty stream."²⁷⁸ The addition of park area was also praised. The *New York Times* described the park offerings in Riverside Park: "seventy-eight acres of children's playgrounds, comfort stations, athletic fields, tennis and handball courts, baseball and football fields and tracks for roller skating and bicycling. The entire area west of the railroad at Inwood Hill Park from Dyckman Street to the Harlem River Ship Canal will be devoted exclusively to recreation. There will be three miles of waterfront promenade and twenty-six and one-half miles of winding footpaths. There will also be four boat basins."²⁷⁹ The parkway was not simply a new road. It served as a pathway to the recreational opportunities of the West Side and helped spur residential development of the areas through which it passed.

The Impact

In the Bronx, the completion of the parkway was one of many factors leading to real estate development of the area. Even before the parkway had been completed, Riverdale and Spuyten Duyvil were already seeing the speculative beginnings of large-scale apartment developments. Many realtors anticipated a building and business revival associated with the completion of the Henry Hudson Parkway: "probably the most important factor leading to the recent renewed realty and building interests in those areas has been the construction of the Henry Hudson Bridge and the Parkway."²⁸⁰ Others touted the "twenty-two minutes traveling time [to] Wall Street" and the "opportunity to own a real suburban home within city limits."²⁸¹ Although there was a slow-down during World War II, the post-war building boom more than fulfilled the developers' dreams. As apartments took over lots formerly occupied by private estates and mansions, traffic congestion became the norm in the residential areas, and some older residents took to building bumps in front of their houses to slow traffic.²⁸²

Developers built large apartment complexes along sections of the parkway to accommodate those who preferred to leave Lower Manhattan for the less densely crowded neighborhoods of Upper Manhattan. The apartment buildings replaced the forests, suburban homes and mansions that had formerly characterized the parkway

276 Quotations from Caro, *The Power Broker*, 556-557.

277 Bernstein, "West Side Highway to Open," 187.

278 Brock, "West Side Plan," E10.

279 "Parkway to Open on Upper West Side," *New York Times*, October 11, 1937, 23.

280 "Realty Conditions Reveal Signs of Growing Stability," *New York Times*, August 2, 1936, RE1.

281 "Hudson Parkway Opens New Areas for Development," *New York Times*, December 13, 1936, RE1.

282 George McNickle, "Riverdale is a Contrast in Mansions and Skyscraper Apartment Houses," *New York Times*, October 1, 1961, R1.

landscape.²⁸³ One example of this shift is Charles Paterno's "castle" that was built on a bluff overlooking the Hudson River at West 181st Street. Designed by John C. Watson and constructed between 1907-1909, the "cliff-top marble fantasy" known as Paterno Castle reportedly had "rooms of various styles--including one in a Japanese motif--a mushroom cellar, a swimming pool surrounded by bridge cages and a 20-by-80-foot master bedroom." Paterno ultimately expanded the site to 7 acres, building greenhouses and gardens and enclosing it with a 1000' long crenellated retaining wall, still visible from the northbound lanes of the Henry Hudson Parkway. In 1938, Paterno demolished his castle and built the Castle Village Apartments for \$6 million, which consisted of "five 13-story neo-Georgian brick towers with 580 apartments" and a garage. Some pieces of the original estate survive, including the retaining wall, a portion of which collapsed in May 2005.²⁸⁴

In the early 1930s, Riverdale and the Spuyten Duyvil district (defined as "separated from the Inwood section of Manhattan Island by the Harlem Ship Canal") in the Bronx became popular residential areas. Riverdale stretches from "Spuyten Duyvil, opposite the tip of Manhattan Island, to Yonkers, and from Broadway to the Hudson River."²⁸⁵ One reason was the picturesque qualities of the area. Riverdale was valued for its "high elevation and picturesque views over the Hudson River" creating "many charms for residential use." The scenic virtues of the parkway were extolled in print. According to Clifton Jamison, a realty broker quoted in the *New York Times*, the building boom was the result of the construction of the Henry Hudson Bridge and the Parkway.²⁸⁶ In 1953, Riverdale was still a popular residential area. Myron Minskoff, of the development firm Sam Minskoff & Sons Inc., noted its popularity stemmed from the ability to make a "quick trip down the highway" that "brings the Wall Street financial district, the City Hall area, the Hudson River tunnels, the Pennsylvania Station and the shopping districts within easy

283 For specifics on migration patterns, see Burrows and Wallace, especially pp. 1111-1131, for general information on immigration to New York City before the turn of the century.

284 The Paterno family was in the real estate and construction business, although Charles Paterno had originally studied medicine at Cornell Medical College. Christopher Gray, "Shadows of an Uptown Castle, and Its Builder," *New York Times*, September 10, 2000, RE7. In 1970, Carlo Paterno (son of builder Charles V. Paterno) put the apartments were put up for sale, after new rent control laws made the apartments far less lucrative for him. According to a newspaper article, "in the 31 years since the apartments were built, taxes have tripled and the payroll has increased tenfold. The buildings...were valued for tax purposes at \$7-million, including land" in 1969. See Glenn Fowler, "Castle Village, Overlooking River, Sold," *New York Times*, August 2, 1970, 207. On May 12, 2005, around 3:00 in the afternoon, a small portion collapsed onto the Riverside Drive access road. Just a few minutes later, a large landslide of rocks and earth fell onto the northbound lanes of the parkway, measuring nearly 20,000 cubic yards. The wall collapse had been imminent with pieces periodically falling off and its structural integrity in question. As of May 2006, repairs have not been made due to a dispute over who is responsible for paying for the reconstruction. Investigation is ongoing as to the cause of the collapse. See Robert D. McFadden, "Wall Collapses onto a Busy Manhattan Highway," *The New York Times*, May 13, 2005; Justin Rocket Silverman, "Wall Collapse Still Probed, One Year Later," *Newsday.com*, May 12, 2006.

285 McNickle, "Riverdale is a Contrast," R1.

286 "Realty Conditions Reveal Signs of Growing Stability," RE1.

reach” in addition to increasing amenities and good infrastructure.²⁸⁷ According to a Mr. Buckley, “The parkway is a prime factor in further development, making it possible for a growth in keeping with the present high plane of the section. It is gratifying that this fine monument to engineering...closely fits in with the beauty of the Hudson River at Riverdale. It accentuates the charm of the river shore with the picturesque Palisades in the background.”²⁸⁸ The popularity continued into the 1960s, as noted in a 1961 *New York Times* article:

A source of wonder to nonresidents of Riverdale is why apartment houses are clustered along the Henry Hudson Parkway, which winds through the section. For one thing, the parkway is on a ridge, which offers the best view. For another, apartment builders, particularly those who first went into Riverdale, found it easier to get financing from banks if they had sites along the parkway. A third reason is that, in general, the ridge is zoned for multiple dwellings, while the slopes are reserved for one- and two-family houses.²⁸⁹

Examples of construction projects in the 1930s include the Ewen Park Apartments at Riverdale Avenue and West 232nd Street, designed by Arthur Weiser, and another Paterno project, the Cambridge House at 511 West 235th Street and designed by Rosario Candela.²⁹⁰ In fall 1947, a group of apartment buildings equipped to house 438 families was slated for construction between West 235th and 236th streets, while the Hendrick Hudson House at the parkway and West 227th Street opened in 1950.²⁹¹ In the 1960s, construction continued, such as the erection of an apartment building consisting of a 26-story and a 20-story building at the southern end of Riverdale, near Kappock Street and Johnson and Netherlands avenues, for 1020 families. Private homes were built as well in Riverdale, such as a \$130,000 home for an executive of Stella d’Oro Biscuit Company that was mentioned in a 1961 newspaper article. The skyscraper apartment buildings did cause some consternation among long-time Riverdale residents, who wanted to maintain the neighborhood as a small, “semi-rural appendage to New York City.”²⁹² More recently, Donald Trump’s “city” on Riverside Boulevard, just south of West 72nd Street, has drastically altered the landscape at the southern terminus of the HHP as massive

287 “Riverdale Suites in Strong Demand,” *New York Times*, October 4, 1935, R1.

288 “Hudson Parkway Opens New Areas,” RE1.

289 McNickle, “Riverdale is a Contrast,” R1.

290 “Realty Conditions,” RE1.

291 See “Housing Planned for Riverdale,” *New York Times*, May 25, 1947, R1, for image of apartment buildings designed by J.M. Berlinger at West 235th and 236th streets; “Bronx Apartments Nearing Completion,” *New York Times*, December 7, 1950, 68, for image of Hendrick Hudson House designed by Tito De Vincenzo. Other advertised apartment buildings included River House, located at West 254th Street, designed by S. J. Kessler and Sons and built by Ferman Builders, “Luxury Housing Overlooking Hudson,” *New York Times*, June 8, 1952, R1; and Douglas Park Housing at West 236th Street, designed by Kahn & Jacobs, Rosario Candela and Paul Resnick and built by Sam Minkoff & Sons, “Apartments Overlooking Hudson,” *New York Times*, April 29, 1951, R1.

292 McNickle, “Riverdale is a Contrast,” R1.

skyscraper condominium buildings have eclipsed the gracious apartments that formerly overlooked the river.

All the development placed an enormous burden on the HHP. Communities such as Riverdale became increasingly suburbanized, which then encouraged commuter use of the parkway as a highway. In addition, the sheer size and number of apartment complexes altered the character of the viewshed of the parkway.

Safety Improvements

Evolving vehicle and road design, as well as changes in driving habits, have resulted in changes in safety standards in the years after the parkway was completed. This has resulted in changes to the parkway to meet updated standards. In 1947, engineers remedied the lack of turnouts along the parkway by constructing twenty-six emergency turnouts between West 84th and 179th streets. Some of these turnouts were subsequently removed from service or paved over with asphalt, but a reasonably intact one can still be seen along the Cherry Walk at West 90th Street, separated from the parkway by W-beam guard rails. Over the years, engineers also solved the shoulder problem by providing intermittent paved shoulders, indicated as such by reflective road stripes.

Since the 1960s, the New York State Department of Transportation (NYS DOT) has systematically installed modern guiderails and barriers along the parkway: a 1965 contract for the section between Kappock Street and the city line specified new box beam guardrails, median barriers and glare screens. During the 1970s, construction projects included the rehabilitation of the parkway viaduct between West 72nd and 82nd streets, and the placement of MPBO and HPBO median barriers (commonly known as W-beam guardrails) between West 79th and 172nd streets.²⁹³ Beginning in 1979, and continuing throughout most of the 1980s, workers redecked the roadbed and repaired curbs, drainage systems, signs and lighting standards between St. Clair Place and the Westchester border. They also added chain-link fencing to most of the bridges in the Bronx during this period.

Since 2000, DOT has placed emergency metal retention nets on the rocky outcroppings between West 181st and Dyckman Street and between Fieldston Road Bridge and West 252nd Street, which can still be seen. They also addressed the banking problem on the S-curve north of the George Washington Bridge. This problem was originally created when the two-way Riverside Drive became the northbound parkway lanes so that cars traveling into the curve leaned out of rather than into the curve.

Workers have replaced all the original parkway luminaires with modern Deskey-style highway lights. Galvanized steel W-beam guardrails and concrete Jersey barriers predominate along the entire length of the parkway, including along bridge parapets. Chain link fencing has also been added, either to help prevent pedestrians (and other objects) from falling off bridges, or to reduce headlight glare in the median. Most of the

²⁹³ MPBO and HPBO refer to “medium post” and “heavy post” blocked-out corrugated beam guardrail systems.

decorative Art Deco steel railings in Riverside Park have been removed, although there are remnants at West 79th Street and West 96th Street. Motorists have glimpses of the original cable tension guardrails (W-beam guardrails protect them from parkway traffic) along the Cherry Walk between West 85th and 96th streets. In the Bronx, most of the timber rails are gone, although a few sections remain (probably rebuilt) along some of the service roads between Manhattan College Parkway bridge and West 246th Street Bridge, and on the Van Cortlandt Equestrian Bridge. Directional and caution signs, formerly low-lying and only on the roadsides, are now of every size, shape and color, and are even mounted on historic bridges.

In addition to these modifications, the change in oversight of the parkway from a centralized authority to New York State Department of Transportation, New York City Department of Transportation, and New York City Parks Department further complicates the management of the parkway.²⁹⁴ The result is that the current HHP is a patchwork of design features. For example, there is a patchwork of types of guide rails and fences including W-beam, Art Deco, timber, steel pickets, chain-link, as well as jersey barriers (plain and striped), “temporary” orange barrels, cones and bollards, scattered up and down the parkway and along its right-of-ways. Ongoing construction work, along with neglected landscaping and abandoned overlooks and accesses, contribute to--indeed emphasize--the shift in use from a parkway for recreational use to a commuter thoroughfare. Despite that shift, the HHP has retained a significant number of original features.

PARKWAY CONNECTIONS

The Henry Hudson Parkway provides connections to a larger network of roads and recreational opportunities via bridges and roads. Significant ones are discussed below.

George Washington Bridge

The George Washington Bridge straddles the Hudson River between West 178th Street on the Manhattan side and Fort Lee on the New Jersey shore, connecting the HHP to the Palisades Interstate Parkway. The Port Authority, under the direction of its chief engineer Othmar Ammann (1879-1965), built the bridge between 1927 and 1931. Leon S. Moissieff and Allston Dana served as consultants, and Cass Gilbert was architect. Swiss-born and educated, Ammann had a long and illustrious career. His work included the Bayonne Bridge (1931), the largest steel arch bridge in the world until 1977, as well as the Verrazano Narrows Bridge (1964), which was the longest suspension bridge in the world until the Humber Bridge (England) surpassed it in 1981. The George Washington Bridge was the longest suspension bridge in the world when it opened. Originally built as a six-lane single-deck suspension bridge, it became an eight-lane span in 1946. In

294 See the study prepared by Sam Schartz LLC, “Understanding Jurisdiction Along the Henry Hudson Parkway,” for additional information, available at “The Henry Hudson Parkway Scenic Byway Initiative,” at <http://www.henryhudsonparkway.org/hhp/facts2.htm>, accessed November 2006.

1962, with the addition of the lower deck, it became the world's only fourteen-lane suspension bridge.²⁹⁵ The bridge's unique features included the anchorage on the New Jersey shore, in which "two sloping funnel-shaped tunnels were blasted out of igneous rock of the palisade, and the cable was anchored in the rock itself rather than in concrete" as it was on the New York side.²⁹⁶ The naked steel towers were another unique feature. Amman struggled with the decision of whether or not to clad the towers and ultimately decided to since the contrast between the solidity of stone towers and the delicate suspension threads appealed to him. Gilbert proposed that the towers be clad in granite for both practical (it would protect the steel and add strength) as well as aesthetic reasons. The heavy towers were never clad as intended due to the onset of the Depression since it was cheaper to simply paint the steel.²⁹⁷ The debate between Amman and Gilbert was symptomatic of a larger discourse occurring in the 1930s between engineers and architects involved in bridge construction over bridge aesthetics and how much decorative embellishment was necessary on an engineered structure.²⁹⁸

The George Washington Bridge interchange is a critical junction not just for the Henry Hudson Parkway, but also for a number of other routes on the Manhattan side, including I-95 and US 1 (both of which are also known as the Trans-Manhattan Expressway), Riverside Drive and Broadway (US 9). It connects to the New Jersey Turnpike to the west and the Cross-Bronx Expressway to the east. The network of on- and off- ramps has been reconfigured many times over the years. Between 1938 and 1939, a new approach from northbound Henry Hudson Parkway that bypassed Riverside Drive was added; workers also built two new ramps that crossed over Riverside Drive and completed the tunnel approach from West 178th Street to Highbridge Park, near the Harlem River Speedway.²⁹⁹ In 1953, a connection from the bridge to the southbound parkway was completed; this route avoided a tortuous path that included a hairpin turn and northward detour under the bridge before circling back south to join the southbound parkway lanes.³⁰⁰ The 1962 double-decking project included additional structures, such as the new Pier Luigi Nervi designed bus station and the twelve-lane Trans-Manhattan Expressway. It also provided three new exits and approaches to the HHP. The resulting exchange was so multi-layered and complex that the *New York Times* estimated in 1962 that close to a million dollars' worth of signs had been erected to direct drivers to the correct lanes.³⁰¹

295 Neil Greentree, "Othmar Ammann's Glory," *Smithsonian Magazine* (October 1990), [article online], accessed September 8, 2005, available at

http://www.smithsonianmag.si.edu/smithsonian/issues99/oct99/object_oct99.html.

296 Carl W. Condit, *American Building: Materials and Techniques from the Beginning of the Colonial Settlements to the Present* (Chicago: The University of Chicago Press, 1968), 235.

297 David P. Billington, *The Tower and the Bridge: The New Art of Structural Engineering* (Princeton: Princeton University Press, 1983), 134.

298 See Caratzas, 96-97 for more information.

299 George M. Mathieu, "City's Improved Exits Ready," *New York Times*, July 23, 1939, XX1.

300 "New Ramp at George Washington Bridge Nearly Ready," *New York Times*, October 27, 1953, 38.

301 Joseph C. Ingraham, "Double-Deck Span," *New York Times*, August 26, 1962, 372.

Since the 1962 addition, the interchange has remained essentially the same. On the Manhattan side, the Trans-Manhattan Expressway runs east from the bridge between West 178th and 179th streets to the Harlem River; it connects both levels of the bridge with Amsterdam Avenue, Harlem River Drive, and the 181st Street Bridge over the Harlem River. The Trans-Manhattan Expressway also connects directly with the Alexander Hamilton Bridge, which is part of the Cross Bronx Expressway (I-95) and crosses the Harlem River.³⁰² From both levels, ramps connect to the Henry Hudson Parkway, Riverside Drive, and various local streets such as Broadway (US 9).

In 1931, Le Corbusier had declared the George Washington Bridge “the most beautiful bridge in the world....It is the only seat of grace in the disordered city.”³⁰³ It was a glorious tribute; the bridge was, and remains, an anticipatory and awe-inspiring focal point for the motorist on the HHP.

Miller Highway

The West Side Highway (1929-1936), later renamed the Miller Highway (after Manhattan Borough President Julius Miller), was one of the first elevated urban expressways built in America. When it opened, engineers praised it as a roadway that came close to being an ideal highway.³⁰⁴ Despite the accolades, the highway became obsolete within the first two decades of its existence, a victim of its own design. It had been designed to avoid buildings on either side, so it had narrow lanes, sharp curves and short on- and off-ramps. The city commissioned the usual studies to improve the highway, but without adequate backing and maintenance, the structure slowly deteriorated over the years. The end came on December 16, 1973 when a truck crashed through a section of the highway at Gansevoort Street. In the midst of the 1970s fiscal crisis, the city declined to reconstruct the highway and closed it from West 46th to 57th streets. Workers demolished the old West Side Highway (since renamed the Joe DiMaggio Highway) consisting of a surface “boulevard” south of West 57th Street, and a completely rebuilt elevated portion north from West 57th to 72nd streets. At West 72nd Street, a stub of the old Miller Highway remains in place just west of the new highway; part of its deck is still visible, and two original Art Deco light standards remain.

The Empire State Development Corporation is currently seeking approval for its “Miller Highway Project.” To make way for further waterfront development between West 59th and 72nd streets, the company would like to relocate the elevated portion of route 9A, or the Joe DiMaggio Highway (what the report calls the Miller Highway) eastward into a tunnel.³⁰⁵ The old Miller Highway remnant at West 72nd Street would be west of the

302 The Cross Bronx Expressway also connects with the Major Deegan Expressway (I-87) via an interchange on the Bronx side of the Harlem River, according to Michael Caratzas.

303 Le Corbusier, quoted in Tom Fletcher, “George Washington Bridge” [online], accessed September 8, 2005, available at www.nyc-architecture.com/BRI/BRI004-GWB.htm.

304 Victor H. Bernstein, “Safer Motor Roads,” *New York Times*, December 1, 1935, XX1.

305 U.S. Department of Transportation, Federal Highways Administration, Empire State Development Corporation, and New York State Department of Transportation, *Miller Highway Project Final Environmental Impact Statement*, October 2000.

proposed route, and thus would be spared. As part of the proposal, New York City Department of Transportation now has permission from the courts to close the northbound parkway exit at West 72nd Street; this will allow developers to connect Riverside Boulevard to West 72nd Street.

Riverside Park South

The “Miller Highway Project” is tied to the ongoing development of Riverside Park South, which in turn is associated with the controversial Trump development east of the park along Riverside Boulevard. The park is a multi-phase project scheduled to provide 27.5 acres of recreational area between West 59th and 72nd streets. It is located on the former New York Central railroad float bridge that was used to transfer freight cars from waterside yards to barges (and vice versa); and the remains of Pier D, destroyed by fire in the 1970s.³⁰⁶ The completed park will be an important link in the continuous pedestrian-bike path from the Battery to the Henry Hudson Bridge.³⁰⁷

Hudson River Valley Greenway

The pedestrian-bike path is part of the proposed 150-mile long Hudson River Valley Greenway stretching from Battery Park in Manhattan to Troy, New York.³⁰⁸ The Hudson River Valley Greenway Act of 1991 created a state agency to facilitate voluntary community projects designed to preserve natural, historic and recreational resources along the Hudson River corridor. Since 1995, New York City has actively participated in the creation of a continuous multi-use greenway route along the Hudson River shoreline.

Much of the greenway in Manhattan is complete. The route begins at Battery Park and extends north through Hudson River Park, Riverside Park South, and Riverside Park. The section of the Greenway running along the HHP utilizes some of the paths and bridges constructed during the Moses-era. There is a temporary detour between West 83rd and 91st streets where eventually the trail will pass on a cantilever extension of the waterfront path to allow the greenway to stay along the shore. The route continues as the

306 “Mayor Giuliani Joins Donald Trump, Parks Commissioner Stern and City Planning Commissioner Rose to Open Riverside Park South,” (Press Release #110-01, April 10, 2001) [online], Archives of the Mayor’s Press Office, Accessed September 1, 2005, available at www.nyc.gov/html/om/html/2001a/pr110-01.htm.

307 For more information on Riverside South, see Allee King Rosen & Fleming, Inc. and Philip Habib & Associates, Sive, Paget & Riesel-Counsel, “Riverside South, Final Environmental Impact Statement,” October 1992 and “Miller Highway Project, Final Environmental Impact Statement,” Volume 1, submitted by U.S. Department of Transportation, Federal Highway Administration, Empire State Development Corporation, and New York State Department of Transportation, October 2000. “This report describes the social, economic, and environmental effects of the Miller Highway Project in New York County, New York. The alternatives include the no action and a number of built alternatives for the proposed relocation of the Miller Highway between approximately West 59th and West 72nd Streets, a distance of approximately 1.2 kilometers (0.75 miles).”

308 Greenway routes and information are from New York State, “Hudson River Valley Greenway,” [document online], accessed September 17, 2005, available at www.hudsongreenway.state.ny.us. Also New York City Department of Parks and Recreation, “Where to Ride,” [interactive map online], accessed September 17, 2005, available at www.nycgovparks.org.

Cherry Walk from West 100th to 125th streets, at which point it takes two detours under the Henry Hudson Parkway viaduct between West 125th and 135th streets, and Riverbank State Park. The path continues from West 145th Street to the Harlem River, where the greenway currently ends. The jersey barriers that separate the walk from the parkway are faced on the pedestrian side with a decorative design of a stylized river and embossed seagulls, seen at West 123rd to 125th streets vicinity.³⁰⁹ A proposed route through Inwood Hill would connect to the Bronx via the Henry Hudson Bridge. Several alternatives have been identified for the Bronx portion, including an all river route and upland routes.³¹⁰ The greenway has increased the amount of pedestrian access to the waterfront and at least through Cherry Walk, because the greenway creators shared the spirit of Moses in their care for the “man on foot.”

INTO THE FUTURE

The current state of the Henry Hudson Parkway is uneven. It is no worse than other heavily used highways; it has its share of road deterioration, unsightly billboards, ugly guide rails and concrete barriers, utilitarian overpasses, and roadside litter. The safety improvements implemented on the parkway have compromised its historic integrity, and current community efforts are directed at mitigating such changes. Some safety features may be easier to modify than others, such as more thoughtful placements of smaller-scale signs so as not to obscure historic features (such as stone bridges) or views, or the use of more historically-sympathetic steel-backed timber guardrails and concrete-core stone masonry guard walls in place of W-beam guardrails and jersey barriers.³¹¹ Overall, the parkway has been remarkably preserved so that it maintains the original character. This has been possible through community activism, preservation, zoning, and limits on development.

The management of the parkway is of necessity a cooperative effort. The parkway and its rights-of-way are subject to complex jurisdictional issues involving the New York State DOT, the New York City DOT, the Parks Department, the Metropolitan Transportation Authority, and Amtrak. Community boards of the communities through which the parkway passes also desire to preserve and enhance the parkway and improve community access to the parks and waterfront. The ongoing Henry Hudson Parkway Scenic Byway Initiative is a collaborative process as a result. In 2002, the non-profit Riverdale Nature Preservancy organized the Henry Hudson Parkway Task Force to

309 Henry Hudson Parkway Task Force, “Henry Hudson Parkway (9A) Scenic Byway Initiative: Public Outreach, July 15, 2004,” (report, Henry Hudson Parkway Task Force, Riverdale Nature Preservancy, 2004), 5-6.

310 In 2002, the New York City Environmental Fund funded a study of the viability of the using service roads and overpasses in Riverdale for the greenway route. The New York City Department of Transportation and New York City Parks worked with John Benfatti to determine the route, and in 2004, New Yorkers for Parks commissioned a design plan. The New York Metropolitan Transportation Council is overseeing a conceptual plan for the Bronx Line of the Hudson River Valley Greenway, which will determine how all of these routes will be integrated. Information provided by Hilary Hinds Kitasei.

³¹¹ Marriott, *Saving Historic Roads*, appendix B.

spearhead the initiative; if successful, the parkway would be the first New York State Scenic Byway located in New York City. The initiative has garnered enough public and agency support to gain further study through the New York Metropolitan Transportation Council (NYMTC), of which this report is part.³¹² Other organizations and agencies with input into the initiative include citizen groups such as the Hudson River Valley Greenway, New Yorkers for Parks, and the various community boards: Bronx Community Board 8 (Riverdale and Spuyten Duyvil), Manhattan Community Board 7 (Upper West Side), Manhattan Community Board 9 (West Harlem), and Manhattan Community Board 12 (Inwood and Washington Heights).

CONCLUSION

The Henry Hudson Parkway is an outstanding example of parkway design in full maturity during the transitional years before the efficiently engineered freeway came to dominate the American landscape. The parkway as conceived by Robert Moses was a concrete ribbon connecting city parks and expanding the city's arterial network to connect with other roads. It offered drivers views of the recreational opportunities like the rehabilitated Riverside Park and the wilderness of Inwood and Van Cortlandt parks, the majestic Hudson River and the Manhattan skyline. The topography and scenic views were easily viewed from the car's windshield, uninterrupted by signage, jersey barriers, or other distractions. While the parkway has strayed from Moses' original intent due to the addition of safety improvements and signage, the parkway still provides a diverting array of scenery, from the urban to the natural. The future of the Henry Hudson Parkway will depend not only on recognition of its important place in the history of the American highway and landscape architecture, but also on recognition of, and accommodation to, its continuing role as a vital urban arterial and park system.

³¹² NYMTC is the regional transportation planning organization for New York City, Long Island, and the lower Hudson Valley, and includes as its members Nassau, Putnam, Rockland, Suffolk, and Westchester counties, MTA, NYC Department of Planning, NYC DOT, and NYS DOT.

APPENDIX

HENRY HUDSON PARKWAY INVENTORY

INTRODUCTION

The following represents an inventory of significant engineering and cultural resources along the Henry Hudson Parkway (HHP), and within the five associated parks of the study area, traveling from south to north. HAER interns Elizabeth Michell and Katharine Reed undertook the field work for the inventory in summer 2005, with additional field work done and research by HAER project leader Christopher Marston and HAER historian Justine Christianson in winter and spring 2006. The inventory has been divided into sections that include: bridges, interchanges, guide rail types, parking lots and scenic overlooks, adjacent highways, recreational facilities, and structures and monuments. Each entry contains historical information about the structure, a brief description, and digital photographs of current conditions. The resources included in the inventory are part of the parkway infrastructure, are adjacent to the parkway, or are within one of the parks through which the parkway passes.

A note about terminology used in this inventory:

Highway terminology defines an overpass as when the subject highway (in this case the HHP) passes OVER an intersecting highway or railroad. An underpass is defined as when the subject highway passes UNDER an intersecting highway or railroad. These technical definitions have not been used, because they were not used in the historical record. For example, the West 83rd Street pedestrian tunnel under the parkway in Riverside Park is called an “underpass” on a set of drawings, and this term is consequently used in the inventory.

TABLE OF CONTENTS

Bridges	91
Interchanges	132
Guide Rail Types	140
Parking Areas and Scenic Overlooks	143
Adjacent Highways	150
Recreational Facilities	155
Structures and Monuments	183

BRIDGES

Name: West 72nd to 79th streets viaduct

Location: HHP in Riverside Park at West 72nd to 79th streets

BIN: 2229289

Date of Construction: 1937

Type: steel girder viaduct

Description: The 830'-8" long viaduct carries the parkway over the railroad tracks. It is constructed of riveted steel girders carried on steel piers with jersey barriers placed on top of the steel parapet. The viaduct abuts a pedestrian underpass at West 73rd Street.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: Amtrak

View of west side of viaduct at West 72nd Street. July 2005.



Detail of riveted steel construction. July 2005.



Name: West 73rd Street pedestrian underpass

Location: HHP in Riverside Park at West 73rd Street

BIN: 222923C

Date of Construction: 1937

Type: Concrete arch pedestrian underpass

Description: Broken range work masonry faces the concrete arch underpass, and granite has been used in the quoins, voussoirs and coping. Concrete blocks form the barrel of the arch. The underpass connects paths on the east and west sides of the parkway, providing pedestrian access to the waterfront, which was an important component of Robert Moses' plan. The underpass is part of the 1929 McKim, Mead and White plans for the park, which specified that the railroad would be enclosed in a tunnel designed to look like a Roman aqueduct. A highway would run on top of the enclosure with pedestrian tunnels underneath. Robert Moses dismissed this plan, claiming that it would create a roller coaster of a parkway. The section of the McKim, Mead and White plan from West 72nd to 79th streets remained, and this underpass is one feature of that era of construction.

Builder/Engineer/Architect: McKim, Mead and White design, built by Henry Hudson Parkway Authority

Current Owner: New York City Parks Department



West 73rd Street underpass. July 2005.

Name: West 79th Street underpass

Location: HHP in Riverside Park at West 79th Street entrance ramp to northbound parkway lanes

BIN: 2229309

Date of Construction: 1938

Type: Concrete arch underpass

Description: Broken range work masonry clads the concrete arch underpass and abutments. The arches have granite voussoirs, and there are granite quoins as well. The underpass measures 26' long and 90.5' out to out.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City Parks Department



West 79th Street underpass. July 2005.

Name: West 83rd Street pedestrian underpass

Location: HHP in Riverside Park at West 83rd to 84th streets

Date of Construction: ca. 1937

Type: Rigid frame concrete arch pedestrian underpass

Description: The rigid frame concrete arch underpass allows pedestrians to cross under the parkway from one side of the park to the other. The underpass is faced with broken range work masonry while the arch has a granite voussoir. The barrel of the underpass is of concrete blocks painted white.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City Parks Department



West 83rd Street underpass. July 2005.



Arch detail. July 2005.

For more information, see New York Central Railroad, Roof Covering Over Tracks, 82nd-94th Streets, "Pedestrian Underpass at 83rd Street," 5/27/36, available at New York City Department of Parks, Olmsted Center.

Name: West 93rd Street underpass

Location: HHP in Riverside Park at West 93rd Street

Date of Construction: ca. 1937

Type: Rigid frame concrete underpass

Description: The underpass allows pedestrian access to the river as well as motorist access from the southbound to the northbound lanes of the parkway or to Riverside Drive. The underpass, which has a 12'-8" clearance, is clad in broken range work masonry. The elliptical arch has granite voussoirs, and the abutments feature granite quoins. The coping is also of granite.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City Parks Department



West 93rd Street underpass with roadway. July 2005.

Name: West 96th Street bridge

Location: Carries Riverside Drive over West 96th Street

BIN: 2246970

Date of Construction: 1902

Type: Steel arched girder

Description: Exemplifying City Beautiful aesthetics, the West 96th Street bridge consists of riveted steel arched girders with a metal railing. Flanking both sides are symmetrical arches of articulated granite blocks defining the pedestrian walkways that flank West 96th Street. The elliptical arches have granite voussoirs and decorative keystones of granite. Masonry wing walls extend from the granite arches and feature granite coping and granite pillars. The masonry bridge abutments have a granite coping as well. A granite balustrade on both ends unifies the abutments and arches. The bridge measures 97.8' out to out and 108' long and recently underwent a complete restoration.



Bridge from West 96th Street. March 2006.



Interior of bridge showing riveted steel arches. March 2006.

Detail of pedestrian walkway arch. March 2006.



Name: West 100th Street underpass

Location: HHP in Riverside Park at West 100th Street

Date of Construction: ca. 1937

Type: Rigid frame concrete arch underpass

Description: This underpass is similar to that at West 93rd Street and is part of a ramp system in this location. A broken range work masonry wall separates the pedestrian traffic from motorists. Granite quoins, voussoirs, and coping break up the expanse of broken range work masonry that clads the rigid frame concrete elliptical arch underpass. This underpass is part of a ramp system in this location.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City Parks Department



West 100th Street underpass with pedestrian walkway and road. July 2005.

Name: Riverside Drive Viaduct

Location: Riverside Drive from St. Clair Place to West 134th Street

BIN: 2246660

Date of Construction: 1897, rehabbed 1984, 1988 due to corrosion

Type: Steel girder

Description: The Manhattan Valley cuts through the landscape from West 129th to 135th streets, so a riveted steel viaduct with open spandrel parabolic arch ribs was built to carry Riverside Drive. The viaduct terminates in a coursed stone masonry retaining wall with access stairs from Riverside Drive to St. Clair Place below. The viaduct measures 1809' long and 81'-7" out to out and extends over St. Clair Place and Twelfth Avenue (nicknamed "Death Avenue" for the perilous grade crossings located there). Currently, there are a number of commercial structures located along St. Clair Place, like the Fairways supermarket. The bridge had to undergo a major rehabilitation in the mid-1980s because engineers discovered that the beams were rusting.

Builder/Engineer/Architect: Francis Stuart Williamson



Underside of Riverside Viaduct (left), access steps from St. Clair Place (right). July 2005.



Historic images of the viaduct include: "Viaduct, Riverside Drive, One Hundred and Twenty-Fifth Street," in Mid-Manhattan Library Picture Collection, call no. PC NEW YC-Brid, dig. id. 800512; "Manhattan-133rd Street (West)—Park Avenue," 1925, call no. 0973-D5, dig.id: 722956F and "Riverside Drive, St. Clair Place," Percy Loomis Sperr, Photographer, 1931, call no. 0967-E2, 0967-E3, dig. id. 722799F. All available in Photographic Views of New York City, 1870s-1970s, Humanities and Social Sciences Library, New York Public Library Digital Gallery; "Riverside Drive Viaduct," Microfilm, MN#4220, Roll 9, DPR #2422-23-24, New York City Municipal Archives.

Name: New York Central Railroad viaduct

Location: St. Clair Place to West 135th Street, between the HHP and 12th Avenue

Type: Steel girder and frame

BIN: 2229339

Date of Construction: ca. 1930

Description: The steel girder and frame viaduct measures 78' out to out and 4730' long and carries the railroad over a commercial area. The parkway viaduct was built adjacent to the elevated railway, which eliminated the dangerous grade crossings that gave Twelfth Avenue the nickname "Death Avenue." Next to the railroad viaduct is a long and narrow brick building once used for railroad operations.



Railroad building alongside viaduct. March 2006.

Name: West 138th Street access bridge

Location: Crosses the HHP, the railroad tracks and Riverside Park from Riverside Drive at West 138th Street to Riverbank State Park

Date of Construction: ca. 1989

Type: Girder pedestrian bridge

Description: The bridge was built to provide secondary access to Riverbank State Park, mostly for use by pedestrians with some restricted vehicle access. The steel girder overpass has been painted green, and it has concrete abutments, piers and parapet, with additional chain link fencing. The girders have been tagged with graffiti.

Builder/Engineer/Architect: Unknown

View from parkway of West 138th Street access bridge. July 2005.



Name: West 145th Street access bridge

Location: Crosses the HHP, the railroad tracks, and Riverside Park from Riverside Drive at West 145th Street to Riverbank State Park

Date of Construction: ca. 1989

Type: Steel girder pedestrian bridge

Description: Constructed to provide visitor access to Riverbank State Park, paired concrete piers support the steel girder overpass. The bridge has a concrete parapet and chain link fencing. It has been tagged with graffiti. At the east end of the bridge, a visitor toll booth is located.

Builder/Engineer/Architect: Unknown



View of West 145th Street access bridge from parkway. July 2005.

Name: West 145th Street overpass
Location: Riverside Drive at West 145th Street
BIN: 2267130

Date of Construction: 1930

Type: Concrete arch underpass

Description: Before the construction of Riverbank State Park, West 145th Street passed under Riverside Drive and across the tracks to the recreational area at West 146th Street. Now closed, the concrete arch overpass measures 41' long and 141.5' out to out with a sidewalk on the west side. The overpass was built as part of the 1911 extension of Riverside Drive.

Overpass and retaining wall under the Riverbank State Park Access Bridge. March 2006.



Name: West 148th Street underpass
Location: HHP in Riverside Park at West 148th Street
BIN: 2266229

Date of Construction: 1936

Type: Concrete arch pedestrian underpass

Description: The concrete arch underpass allows pedestrian access to both sides of the park from Palisades Playground along Riverside Drive to the Ten Mile River Playground along the riverfront. The underpass is different from the rest of the Riverside Park architecture because the concrete structure has been left exposed rather than faced in masonry. The concrete of the wingwalls has been left exposed too. The structure measures 80' out to out and 23' long.

Builder/Engineer/Architect: Madigan & Hyland

West 148th
Street
underpass.
March 2006.



For image see "Bridge at 147th St and Henry Hudson Parkway" from Metropolitan Transit Authority, Bridges & Tunnels Archives.

Name: West 148th Street railroad overpass

Location: Riverside Drive at West 148th Street

BIN: 2245230

Date of Construction: 1940

Type: Steel girder pedestrian overpass

Description: Extending from a terraced lookout at Riverside Drive and West 148th Street at Palisades Playground, three flights of stairs lead to the green steel girder overpass, which crosses over the railroad to Ten Mile River Playground on the west side of the parkway. The stairs have masonry and metal handrails on the exterior sides as well as center metal handrail. Cast metal light standards with a decorative faunal motif at the base sit on stone piers flanking the overpass. The original fencing along the overpass is decorative with scrolls placed at regular intervals, with chain link fencing added later. The overpass measures 10.8' out to out and 105' long. At the west end of the overpass, a set of metal stairs leads down to Ten Mile River Playground. The stairs extend north and south from a broken range work masonry abutment with granite quoins. The stairway has two landings, the highest of which is supported by piers. The stairs end at a semi-circle landing of stone.



View of Riverside Drive lookout and overpass. March 2006.



Lamppost detail.
March 2006.



Stairs leading down from
overpass. March 2006.

Name: West 151st Street railroad overpass

Location: Riverside Drive at West 151st Street, over the railroad tracks

BIN: 2245240

Date of Construction: 1927

Type: Steel Warren truss pedestrian bridge

Description: The steel Warren through truss pedestrian bridge crosses the railroad tracks. It was constructed to provide access for pedestrians from Riverside Drive, which has a circular overlook at this location, over the railroad tracks and down to the shores of the Hudson, where there was a sand baseball field among the railroad structures. The bridge measures 8.5' out to out and 120' long.

Builder/Engineer/Architect: Unknown

Current Owner: New York City/Amtrak



View looking north with Riverside Drive cantilever in background. March 2006.

For historic images, see: "West Side Improvement, South from 153rd St Viaduct," neg. no. 3038/5759, 6/1/35, and "View North from 145th St," neg. no. 13471, 5/16/38, both available at New York City Parks Department Photo Collection, the Arsenal; "Riverside Drive, 152nd St," Percy Loomis Sperr, Photographer, 1940, call no. 0967-F2, dig. id. 722804F, in Photographic Views of New York City, 1870s-1970s, Manhattan, Humanities and Social Sciences Library, in New York City Public Library Digital Gallery.

Name: West 155th Street railroad overpass

Location: Riverside Drive at West 155th Street, over the railroad tracks

BIN: 2245290

Date of Construction: 1908

Type: Riveted steel Pratt through truss pedestrian bridge

Description: The pedestrian bridge extends out from the wall supporting the Riverside Drive cantilever section. The retaining wall was necessary because the railroad tracks are at a much lower grade level than Riverside Drive. The bridge measures 109' long and 7.7' out to out.

Builder/Engineer/Architect: Unknown

Current Owner: New York City/Amtrak



View of Riverside Drive cantilever and West 155th Street pedestrian bridge. March 2006.

Name: West 173rd Street underpass

Location: Fort Washington Park at West 173 Street, beneath HHP southbound lanes

BIN: 2229360

Type: Pedestrian underpass

Description: The underpass allowed pedestrian access to pathways in Fort Washington Park, starting at Riverside Drive and West 165th Street, following a path along a George Washington Bridge ramp, through the underpass, and then across the tracks down to the riverfront near the Little Red Lighthouse. A ca. 1925 cast iron light standard still stands on the east side of the underpass.



West 173rd Street
underpass. July
2006.



Light standard.
July 2006.

Name: West 175th Street railroad overpass

Location: Fort Washington Park near West 175th Street, over the railroad tracks

BIN: 2245260

Date of Construction: 1930

Type: Steel girder pedestrian bridge

Description: This riveted steel girder pedestrian bridge crosses over the railroad tracks that run between the parkway and the river. The bridge and the scroll and wire mesh railing have been painted green. The bridge's abutments are broken range work masonry with granite quoins. Two cast light standards flank both ends of the bridge. On the west end of end of the bridge, two flights of stairs lead down to the Hudson River Valley Greenway trail. Broken range work masonry covers the stair walls, which have granite coping and landings. The bridge measures 12.8' out to out and 120' long.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department/Amtrak

Overpass with
George
Washington
Bridge in
background.
March 2006.



Stairwell. March 2006.

Name: Pedestrian overpass

Location: Fort Washington Park at West 181st Street vicinity

Date of Construction: Unknown

Type: Steel Pratt pony truss pedestrian bridge

Description: The steel Pratt pony truss with a wooden deck carries the Hudson Greenway trail over the railroad cut. Due to the construction of the Greenway trail, metal fencing was added to the sides for safety reasons.

Current Owner: New York City Parks Department



Side elevation of bridge with George Washington Bridge in background (top photo). Decking and fencing (middle photo). View of railroad cut from bridge, looking south (bottom photo). March 2006.



Name of Feature: George Washington Bridge

Location: Hudson River between West 178th Street, Manhattan and Fort Lee, New Jersey

Date of Construction: 1927-31; 1946 two lanes added to upper deck; 1962 lower deck added; various dates for ramps

Description: The monumental George Washington Bridge straddles the Hudson River between West 178th Street on the Manhattan side and Fort Lee on the New Jersey shore, connecting the HHP and the greenway to the Palisades Interstate Parkway and greenway. The Port Authority, under the direction of its chief engineer Othmar Amman, built the bridge between 1927-1931. When it opened, it was the longest suspension bridge in the world. Leon S. Moissieff and Allston Dana served as consultants, and Cass Gilbert was the architect. Two lanes were added to the upper deck in 1946. In 1962, a lower deck was added, making it the world's only fourteen-lane suspension bridge. The 3,500' span features massive steel abutments anchoring the bridge on either side of the Hudson River. On the New Jersey shore, the steel tower was anchored into rock rather than concrete. The steel towers themselves reflect a struggle over aesthetics. Amman ultimately decided that the towers should be clad in stone because the contrast between the solidity of the stone towers and the delicate suspension wires appealed to him. Gilbert as well wanted the towers clad in granite for both practical (it would protect the steel and add strength) as well as aesthetic reasons. With the onset of the Depression, it was decided to simply paint the steel since that was cheaper than cladding. The debate between Amman and Gilbert was symptomatic of a larger discourse occurring in the 1930s between engineers and architects involved in bridge construction over bridge aesthetics and how much decorative embellishment was necessary on an engineered structure.

Builder/Engineer/Architect: Port Authority, under direction of chief engineer Othmar Amman, Leon S. Moissieff and Allston Dana consultants, Cass Gilbert, architect

Current Owner: Metropolitan Transportation Authority



Upper deck of George Washington Bridge, July 2005.

See HAER No. NY-129 for more information. The George Washington Bridge was designated a Civil Engineering Landmark by the American Society of Civil Engineers in 1981.



Pedestrian bridge from parkway. Note jersey barriers with covered chain link fencing obscuring view of rockslide that occurred in May 2005 outside Castle Village on parkway. July 2005.

Name: West 181st Street overpass
Location: Crossing parkway at West 181st Street
BIN: 2229400
Date of Construction: 1955
Type: Steel girder pedestrian overpass
Description: The bridge crosses the northbound parkway lanes and runs under the George Washington Bridge approach, providing access to the Hudson Greenway. The steel girder bridge has a steel railing with chain link fencing, and measures 203' long and 7.5' out to out.

Name: West 181st Street underpass
Location: HHP at West 181st Street
Date of Construction: ca. 1936
Type: Concrete arch pedestrian underpass
Description: The underpass provides pedestrian access to the Hudson Greenway trail and runs under the southbound lanes of the parkway to Riverside Drive. It is faced in rustic stone, and the arch has a stone voussoir.
Builder/Engineer/Architect: Henry Hudson Parkway Authority
Current Owner: New York City Parks Department



Underpass and pathway. March 2006.

Name: Fort Tryon Park bridge

Location: Fort Tryon Park at former Riverside Drive entrance

BIN: 2246500

Date of Construction: 1920

Type: Concrete arch

Description: When entering Fort Tryon Park from the northbound parkway lanes, the drive passes under a concrete arch bridge clad in stone. The bridge carries Margaret Corbin Drive, which loops around the Cloisters and connects to Riverside Drive and West 190th Street. The parapet wall is clad in stone as well and has a stone coping (probably granite). The bridge measures 82' out to out and 40' long. The rustic stonework seen on this bridge is used throughout the park.

Builder/Engineer/Architect: Guy Lowell, Olmsted Brothers

Current Owner: New York City Parks Department



View of bridge from entrance at Riverside Drive. March 2006.

Name: Fort Tryon Park underpass

Location: Fort Tryon Park

BIN: 2245040

Date of Construction: 1920

Type: Concrete arch, pedestrian underpass

Description: As with the other structures in the park, this concrete segmental arch pedestrian underpass is faced in rustic masonry. The underpass allows a pedestrian path to continue uninterrupted under Margaret Corbin Drive to the Pavilion. The underpass is 72.1' long and 12' out to out.

Builder/Engineer/Architect: Guy Lowell, Olmsted Brothers

Current Owner: New York City Parks Department

Underpass with stairs and path. March 2006.



West face of underpass. March 2006.

Name: Fort Tryon Park underpass

Location: Fort Tryon Park

BIN: 2245050

Date of Construction: 1920

Type: Concrete arch pedestrian underpass

Description: The underpass has a segmental arch and a parapet wall, and the whole façade is clad in rustic stone. The 12' long underpass is located near the former Riverside Drive entrance to the park.

Builder/Engineer/Architect: Guy Lowell, Olmsted Brothers

Current Owner: New York City Parks Department



Underpass in Fort Tryon Park.
March 2006.



Detail of barrel and stone cladding. March 2006.



Dyckman Street Bridge, carrying northbound lanes of the parkway. Photo by John Benfatti, April 2005.

Name: Dyckman Street bridge, northbound

Location: Northbound Henry Hudson Parkway lanes at Dyckman Street

BIN: 2229420

Date of Construction: Ramp: 1937; Bridge: 1937

Type: Open spandrel concrete arch

Description: This bridge originally carried both the north and southbound lanes (four total) of the parkway, but now it carries the three northbound lanes and a pedestrian lane. It is a continuous concrete arch bridge with a tied four-arch main span and features an ornamental metal balustrade atop the parapet. The concrete abutments and battered walls have been treated to look like clapboard siding (although the original plans specified ashlar cladding). It has a 51'-18" clearance elevation and measures 234' long and 55' out to out.

Builder/Engineer/Architect: Henry Hudson Parkway Authority, recommended by Gilmore D. Clarke, Consulting Landscape Architect; Waddell & Hardesty, Consulting Engineers; Madigan-Hyland, Consulting Engineers; approved by W. Earle Andrews, Chief Engineer and General Manager; Harry Taylor, Secretary; William H. Latham, Park Engineer

Current Owner: Triborough Bridge & Tunnel Authority

Drawings: Henry Hudson Parkway Authority, Henry Hudson Parkway, "Dyckman Street Bridge, Architectural Elevations & Sections," June 1, 1935, Contract No. 3, available at the Olmsted Center.



Southbound Dyckman Street Bridge with NYC railroad trestle below. Taken from a playground in Inwood Hill Park. March 2006.

Name: Dyckman Street bridge, southbound

Location: HHP southbound lanes at Dyckman Street

BIN: 2229430

Date of Construction: 1939

Type: Steel girder and floorbeam system

Description: The bridge was constructed to accommodate an alteration in the road alignment that occurred as the result of the construction of the upper deck of the Henry Hudson Bridge. The original parkway lanes became southbound lanes only, and a new road for the northbound lanes was built. The bridge measures 2104' long and 40' out to out. The deck has no sidewalk and is bounded by a green steel balustrade.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: Triborough Bridge & Tunnel Authority

Name: Dyckman Street Exit Overpass (no photo)

Location: Dyckman Street vicinity, carrying northbound HHP over a southbound ramp

BIN: 2229410

Date of Construction: 1937

Type: Steel frame

Description: The bridge measures 82' long and 55' out to out. There are concrete abutments and pylons with a concrete balustrade topped by a metal railing. In the vicinity of this bridge is a viaduct spanning the railroad tracks.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: Triborough Bridge & Tunnel Authority

Name: Inwood Hill Park footbridge

Location: Inwood Hill Park at approximately West 213th Street

Bin: 2245300

Date of Construction: 1938

Type: Pedestrian arched steel girder

Description: The footbridge carries the Hudson Greenway trail over the Amtrak right of way. The bridge abutments and walls along the stairs are stone masonry, and the coping is granite. The west side of the overpass has metal stairs with anti-slip treads and an anti-slip landing supported by riveted steel piers. There is a 2" pipe handrail with 5/8" square balusters. The east side of the overpass has a 40' concrete stepped ramp and 5' concrete treads. The concrete bridge deck has concrete curbs as well. The guardrail on the bridge has a bar shaped in a twisted scroll at each end welded to the baluster. The rest of the guardrail has straight balusters with mesh attached. The length of the bridge is 71', and the out to out measures 10'.

Builder/Architect/Engineer: Henry Hudson Parkway Authority, recommended by Madigan-Hyland, Consulting Engineers; approved by Allyn R. Jennings, GM; Harry Taylor, Secretary; W.H. Latham, Park Engineer.

Current Owner: New York City Parks Department



View of footbridge. March 2006.



West end of bridge with stairs (left). Ramp on east end of bridge (right). March 2006.

Drawings: Henry Hudson Parkway Authority, Henry Hudson Parkway, "Pedestrian Overpass at Inwood Hill Park," 12/20/37, Contract No. 24, available at the Olmsted Center.

Name: Inwood Hill Park underpass

Location: Inwood Hill Park at approximately West 215th Street

Date of Construction: 1936

Type: Concrete arch pedestrian underpass

Description: This stone-faced concrete arch pedestrian underpass allows uninterrupted pedestrian access to a trail from the Hudson River to Inwood Hill Park under the southbound lanes of the HHP.

Builder/Architect/Engineer: Henry Hudson Parkway Authority

Current Owner: New York City Parks Department



Pedestrian underpass in Inwood Hill Park, view from Hudson Greenway. April 2005.

Name of Feature: Henry Hudson Bridge

BINS: 5521257, 5521258

Location: near Inwood Hill Park, spanning the Harlem River

Date of Construction: 1935-36; upper deck added in 1937

Type: Fixed plate girder arch

Description: The Henry Hudson Bridge spans the Harlem River and connects the Manhattan and Bronx sections of the HHP. Considered an engineering marvel of its time, the span was the longest fixed plate girder arch bridge in the world when built. The bridge was part of a larger plan to extend Riverside Drive into the Bronx, spearheaded by Borough President George McAneny (1910-13). The construction of the bridge was part of the Regional Plan Association's push to create a comprehensive road network by connecting Manhattan with the Bronx and Riverside Park, the Henry Hudson Parkway, and the Saw Mill River Parkway in Westchester County and beyond. Residents also wanted the bridge because they thought it would help alleviate traffic congestion in the Bronx.

The bridge's designers (Emil Praeger, Madigan-Hyland, Robinson & Steinman, and Waddell & Hardesty) had originally planned for a three-arch span to support six lanes on a single deck. The bankers, however, were not convinced that enough motorists would want to use the bridge, so the final design became a two arch, four lane span with a 42' roadway on a single deck. Nevertheless, Robert Moses was so confident that the public would pay the 10-cent toll that the bridge was built to eventually support a second deck. This plan was structurally feasible because engineers used reinforced steel and built the bridge supports on solid rock on both sides of the canal. After Moses was finally able to convince bankers that the 10 cent toll on the bridge would be sufficient, he (through the Henry Hudson Parkway Authority) was able to sell \$3.1 million worth of bonds.

Workers began construction in June 1935, and the bridge opened to traffic in December 1936. Thomas Crimmins Contracting Company of 734 Lexington Avenue, New York, City, received the contract for the construction of the substructure, estimated to cost \$272,668.50. The company also had an alternate bid of \$324,090.50 that included stone cladding. The American Bridge Company won the contract to do the steel substructure with a bid of \$865,208.59. Its hingeless arch construction required accurate engineering analysis and stress control during all phases, and because river and railroad traffic continued unabated during construction, the insertion of the crown piece (of the arch) necessitated a new approach to jacking so as not to block the river. When the bridge was completed, it was the longest fixed plate girder arch bridge in the world, with a main span of 840'. The mid-span clearance of 142.5' above high water allowed ships to navigate under the bridge without needing a lift or swing mechanism. The bridge had to be built

off center of the Harlem River Channel to circumvent the New York Central Railroad, which ran under the north abutment.

The upper deck carries three lanes northbound, while the lower deck carries four lanes southbound. The bridge once had two pedestrian walkways. One is still open on the west side of the lower level, while the one on the east side of the upper level is currently closed. Granite faced tollbooths for both south and northbound traffic are located on the Manhattan end of the bridge. The current cost per pass through toll is \$2.25.

The toll booth administration building for the bridge was originally of stone masonry with iron doors and window frames, which was specified on the drawings as having either shatterproof or bulletproof glass. The building was entered via a 6' wide vestibule on the ground floor. At the north end was the supervisor's room, which had a safe and closet. The vestibule also opened to a locker room to the north, which was connected to a restroom with a ceramic tile floor. Attached to the building at the north end of the building was a police station. The booths themselves were glass with sheet iron bases. Neon indicators and overhead traffic lights directed the traffic.

Builder/Engineer/Architect: David Steinman, Chief Engineer; Emil Praeger, Madigan-Hyland, Robinson & Steinman, Waddell & Hardesty, designers

Current Owner: Metropolitan Transit Authority



Toll booth from HHP. March 2006.



View of Henry Hudson Bridge from Spuyten Duyvil. March 2006.

Drawings: Henry Hudson Parkway Authority, "Henry Hudson Bridge Upper Deck," 42 sheets, 7/27/37, Contract No. 15, available at the Olmsted Center.

Henry Hudson Parkway Authority, Henry Hudson Parkway, Electric Lighting System, "Henry Hudson Bridge Lighting, Division No. 2 Bridge Light Standard Details," 6/25/36, available at the Olmsted Center.

Henry Hudson Parkway Authority, Henry Hudson Parkway, "Administration Building and Toll Booths," no date noted, Contract No. 10, available at the Olmsted Center.

Photographs: Construction and views of Henry Hudson Bridge (some with Spuyten Duyvil Swing Bridge in background), some courtesy of Steinman Engineers, some taken by Richard Averill Smith for Steinman Engineers, dated 6/18/36, 6/19/36, 6/26/36, 7/8/36, 8/7/36, available at Metropolitan Transit Authority Bridges & Tunnels Archives.

See also Henry Hudson Parkway Authority, *Completion of the Henry Hudson Bridge and Henry Hudson Memorial Park: Published on the Occasion of the Completion of the Henry Hudson Bridge and Approaches, May 7, 1938* (New York: Henry Hudson Parkway Authority, 1938).

Name of Feature: Spuyten Duyvil Swing Bridge

Location: crossing the Harlem River Ship Canal at Spuyten Duyvil, viewable from the Henry Hudson Bridge

Date of Construction: 1899

Type: Steel Warren truss

Description: This steel bridge replaced the original wooden bridge built in 1849. It is a Warren truss, subdivided with lattice sway braces. The 610' bridge has three fixed sections on the Manhattan side and one on the Bronx side. The 290' central section pivots on a turntable that was originally powered by a steam engine. An electric engine replaced it in 1963. The bridge carries Amtrak and allows Circle Line boats through, but it had to be rehabilitated in 1983 after one of the boats hit it.

Builder/Engineer/Architect: Robert Giles, New York Central Railroad

Current Owner: Amtrak



Spuyten Duyvil Swing Bridge. July 2005.

Name: Kappock Street overpass

Location: Carries Kappock Street over the HHP

BIN: 2229440

Date of Construction: 1937

Type: Rigid frame concrete

Description: The Kappock Street Bridge is a single span segmental arch concrete bridge, which measures 47'-10 ³/₄" according to the original drawings. The portion of the abutments facing the roadway is clad in stone masonry like the retaining walls flanking the bridge, but the concrete abutments underneath the bridge and the ramp walls have been treated to look like clapboards. A study of the southeast access wall shows approval for building concrete clapboard walls and planting climbing vines. The abutments feature granite quoins and a granite coping measuring 8" deep. The concrete balustrade has a rubbed surface. Chain link fencing was added at a later date.

Builder/Engineer/Architect: Henry Hudson Parkway Authority, Gilmore D. Clarke, Consulting Landscape Architect; Waddell & Hardesty, Consulting Engineers; and Madigan-Hyland, Consulting Engineers, recommended the plans, and W. Earle Andrews, Chief Engineer and General Manager; Harry Taylor, Secretary; and William H. Latham, Park Engineer, approved it.

Current Owner: New York City



Elevation of bridge and retaining wall. July 2005.



Masonry retaining wall and concrete "clapboard" pattern. July 2005.

Drawings: Henry Hudson Parkway Authority, Henry Hudson Parkway, "Kappock Street Bridge," 8/5/35, Contract No. 4, available at the Olmsted Center.

Name: West 232nd Street overpass

Location: Carries West 232nd Street over the HHP

BIN: 2229450



View of bridge from parkway. July 2005.

Date of Construction: 1936-38

Type: Rigid frame concrete

Description: The rigid frame concrete bridge measures 63' out to out and 78' long. The double segmented arch bridge is faced in broken range work masonry, and there is a beveled-top cutwater on the center pier. The stone parapet has added chain link fencing. The wing walls have been painted white.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City

Drawings: Henry Hudson Parkway Authority, 232nd Street Bridge, Contract No. 7, available at the Olmsted Center.

Name: Pedestrian overpass

Location: Passes over the HHP between West 235th and 236th streets

BIN: 2229460

Date of Construction: 1955

Type: Girder pedestrian bridge

Description: The single span steel girder pedestrian bridge has been painted green. The steel picket railing has additional chain link fencing. The ramp walls are faced in random ashlar masonry. The bridge measures 11' out to out and 230' long.

Builder/Engineer/Architect: Unknown

Current Owner: New York City

View of pedestrian bridge and ramp from parkway. July 2005.



Name: West 239th Street overpass

Location: Carries West 239th Street over the HHP

BIN: 2229470

Date of Construction: 1937

Type: Rigid frame concrete

Description: This double segmental arched overpass crosses the parkway with a 9'-9" clearance. It is faced in broken range work masonry, as are the abutments. There is a rounded decorative cutwater with a corbelled cone top. The central pier is set in a median offset by a jersey barrier. Chain link fencing was installed on the sidewalk in front of the parapet at a later date.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City

View of West 239th Street overpass from parkway. July 2005.



Name: Manhattan College Parkway overpass

Location: Carries Manhattan College Parkway over the HHP

BIN: 2229480

Date of Construction: 1938

Type: Rigid frame concrete

Description: The triple segmental arch bridge crosses the parkway with a 10'-10" clearance. It has a beveled top on a decorative cutwater, stone voussoir, and is clad in broken range work masonry. The parapet was originally masonry with a guardrail on top. Chain link fencing was installed on the sidewalk in front of the parapet at a later date. The bridge measures 43' out to out and 143' long.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City



View of Manhattan College overpass from parkway. July 2005.

Name: West 246th Street overpass

Location: Carries West 246th Street over the HHP

BIN: 2229490

Date of Construction: 1938

Type: Rigid frame concrete

Description: The single span random ashlar-faced bridge has a decorative cutwater with a beveled capstone. The abutments and ramp walls are faced in random ashlar masonry. Chain link fencing was installed on the sidewalk in front of the parapet at a later date. The bridge measures 67' out to out and 83' long.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City

View of West 246th Street overpass from parkway. July 2005.



Name: West 252nd Street overpass

Location: Carries West 252nd Street over the HHP

Bin: 2229500

Date of Construction: 1938

Type: Rigid frame concrete

Description: The rigid frame concrete double span bridge has segmental arches, a stepped voussoir, and broken range work masonry cladding on the bridge and wing walls. The decorative cutwater has a beveled capstone. The parapet has a granite coping. Chain link fencing was added later. The bridge measures 53' out to out and 85' long.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City



View of West 252nd Street overpass from parkway (top). Perspective view of bridge (left) View of parapet and fencing (right). July 2005.

Name: Riverdale Avenue overpass

Location: Carries Riverdale Avenue over the HHP

BIN: 2229510

Date of Construction: 1937

Type: Rigid frame concrete

Description: This rigid frame concrete double segmental arched bridge crosses the HHP. It is faced in broken range work masonry with a granite voussoir and abutment, and there is a corbelled cone-topped decorative cutwater. Chain link fencing was installed on the sidewalk in front of the parapet at a later date. The bridge measures 52' out to out and 100' long.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City



View of Riverdale Avenue overpass from parkway. July 2005.

Name: Fieldston Road overpass

Location: Carries Fieldston Road over the HHP

BIN: 2229520

Date of Construction: 1936

Type: Rigid frame concrete

Description: This bridge has a single span elliptical arch and masonry cladding. Unlike the more refined cut masonry of similar bridges, this bridge used larger and more irregular quarry-faced stones that give the bridge a massive and rather rustic effect. Chain link fencing was installed on the sidewalk in front of the parapet at a later date. The bridge measures 83' out to out and 86' long.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City

View of Fieldston Road overpass from parkway. July 2005.



Name: Broadway Underpass

Location: HHP crosses over Broadway

BIN: 2229530

Date of Construction: 1937

Type: Steel arch girder

Description: The riveted steel arch girder bridge has a metal balustrade with chain link fencing added to it. The coursed masonry abutments have a masonry parapet and a coping of the same type of stone. The bridge measures 80.3' out to out and 94' long.

Builder/Engineer/Architect: Henry Hudson Parkway Authority

Current Owner: New York City



View of overpass from Broadway. March 2006.

Name: Van Cortlandt Park Equestrian Path overpass

Location: Carries park equestrian path over HHP

Bin: 2229550

Date of Construction: 1937

Type: Girder

Description: This concrete girder bridge has decorative granite cutwaters on its central pier. It has a timber guardrail (which was a feature of the original plan) on the parapet. Chain link fencing was installed on the sidewalk in front of the parapet at a later date. The wing walls are clad in broken range work masonry. The central pier sits in the median with jersey barriers surrounding it. The bridge measures 26.1' out to out and 81' long.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Side view of equestrian bridge (top). View of bridge deck with chain link fencing (bottom). July 2005.



Name: Van Cortlandt Park Railroad Bridge

Location: Van Cortlandt Park at HHP

BIN: 2229540

Date of Construction: 1937

Type: Riveted steel girder railroad trestle

Description: The former New York Central Railroad's Putnam Division built this riveted steel girder bridge as an overpass at the same time the parkway was being constructed. This line, originally known as the New York City & Northern, ran passenger service from the Bronx to Brewster, Putnam County from 1881 to 1958. Freight service ended in 1982, and Westchester County acquired the line in 1993. This section of the right-of-way is now part of a 14-mile trail called the South County Trailway in Westchester County that connects to a nature trail in Van Cortlandt Park. The 116' long bridge has concrete piers and abutments faced in stonework in 1937. Chain link fencing was installed on the sidewalk in front of the parapet at a later date.

Builder/Engineer/Architect: New York Central Railroad

Current Owner: New York City Parks Department



View of railroad bridge. July 2005.

Name: Mosholu Parkway overpass

Location: Carries Mosholu Parkway, near the Westchester County border, over the HHP

Bin: 2230310

Date of Construction: 1951

Type: Rigid frame concrete

Description: The bridge crosses the northbound HHP lanes and interchange, taking traffic from Mosholu Parkway to the HHP southbound. The rigid frame bridge has one elliptical arch that spans the HHP's southbound lanes and one semi-circular arch that spans the lane to the Mosholu Parkway. It is clad in broken rangework masonry with a stepped voussoir and a central pier set in the median, which is surrounded by jersey barriers. The arch over the ramp lane has a 7.3' clearance while the arch spanning the parkway has a 8.5' clearance. The bridge measures 68' out to out and 108' long.

Builder/Engineer/Architect: Clarke, Rapuano & Holleran; Howard, Needles, Tammen & Bergendorff; D.B. Steinman

Current Owner: New York City



View south of Mosholu Parkway overpass. July 2005.

INTERCHANGES

Name of Feature: Rotunda and traffic circle

Location: HHP in Riverside Park at West 79th Street

Date of Construction: 1937; traffic circle constructed 1935

Description: The Rotunda is the major landmark of Riverside Park since it is a gateway both to the park and to the waterfront. It is one of four major interchanges on the HHP. The northbound lanes of the parkway have an exit ramp at West 76th Street and an entrance ramp at West 79th Street, which form a half cloverleaf on the east side of the parkway. Southbound lanes exit at a ramp at West 81st Street before encountering a roundabout around the Rotunda. There is an exit ramp at this roundabout that leads to the southbound lanes of the parkway. This forms a traffic circle on the west side of the parkway.

The structure is clad in broken range work masonry. Its top level is the parkway traffic circle on the west side of the parkway. At this level, there are low broken range work masonry walls with granite copings at the traffic circle and ramps. Circular piers with light standards atop punctuate the walls. On the next level of the Rotunda is a courtyard with three arched openings leading from the courtyard to the seasonal West 79th Street Boat Basin Café, which visitors access by stone steps. This level used to feature a pool with a dolphin fountain in the center. The voussoirs of the arched openings are granite, as are the piers. Beyond the café is a large terrace overlooking the marina. The terrace façade is elaborately detailed with a granite ledge table supported by carved granite ovolo brackets. The basement level houses a 200-car garage, accessed by a curved ramp from the traffic circle. The Rotunda's terraces overlook the West 79th Street Boat Basin.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



View of Rotunda traffic circle. July 2005.

BINs for Rotunda interchange:

Name of Feature: Plaza

Location: Covers West 79th Street Boat Basin garage

BIN: 2267717

Date of Construction: 1935

Description: Steel girder, 98.7' out to out and 194' long

Current Owner: New York City Parks Department

Name of Feature: Traffic Circle

Location: Covers West 79th Street plaza

BIN: 2267718

Date of Construction: 1935

Description: Steel girder and floorbeam, 38' out to out and 635' long

Current Owner: New York City Parks Department

Name of Feature: Ramp

Location: Riverside Park at West 79th Street, extends from HHP to West 79th St over Boat Basin garage

BIN: 2267710

Date of Construction: 1935

Current Owner: New York City Parks Department

Name of Feature: Ramp

Location: Riverside Park at West 79th Street, ramp carries traffic from Boat Basin garage to HHP

BIN: 226771A

Date of Construction: 1935

Description: The walls and buttresses are clad with typical Riverside Park stonework, and the ramp has a segmental arch with a granite voussoir. The ramp is 31' out to out and 101' long.

Current Owner: New York City Parks Department



View of West 79th Street ramp. July 2005.

Name of Feature: Ramp

Location: Riverside Park at West 79th Street, carries traffic over Boat Basin garage to garage for staff and boat owners

BIN: 226771B

Date of Construction: 1935

Description: Measures 21.3' out to out and 334' long

Current Owner: New York City Parks Department

Name of Feature: Ramp

Location: Riverside Park at West 79th Street, carries traffic over Boat Basin garage to West 79th Street

BIN: 226771C

Date of Construction: 1935

Description: Measures 21.3' out to out and 427' long

Current Owner: New York City Parks Department

Name of Feature: Ramp

Location: Southbound HHP ramp to West 79th Street

BIN: 226771D

Date of Construction: 1935

Description: Measures 30.3' out to out and 86' long

Current Owner: New York City Parks Department

Name of Feature: Ramp

Location: Riverside Park at West 79th Street, westbound on/off ramp from HHP over pedestrian path

BIN: M00003

Date of Construction: 1935

Current Owner: New York City Parks Department

Name of Feature: Ramp

Location: Riverside Park at West 79th Street, eastbound on/off ramp from parkway over pedestrian path

BIN: M00004

Date of Construction: 1935

Current Owner: New York City Parks Department

Drawings: New York Central Railroad, West 76th St to West 79th St, Express Highway, "Track Covering and West 79th Street Grade Crossing Elimination," available at Olmsted Center.

Name of Feature: Ramps**Location:** HHP at West 92nd and 93rd streets

Description: Between West 92nd and 93rd streets are ramps on both the south and northbound lanes of the HHP. The northbound ramp exits to Riverside Drive at West 95th Street, and there is also an entrance ramp at this location. A triangular median separates the two ramps. The short entrance ramp here is typical of 1930s ramp design, with a tight curve requiring quick acceleration for cars entering the parkway and fast deceleration for exiting traffic.

Builder: New York City Parks Department**Current Owner:** New York City Parks Department**Name of Feature:** West 96th Street interchange

Description: This is the second major interchange of the parkway, and it consists of an exit ramp on the northbound lanes of the parkway as well as an entrance ramp that allows traffic to either enter the northbound lanes or travel under the parkway via the West 100th Street underpass and then enter the southbound parkway lanes via an entrance ramp. Drivers on the southbound parkway lanes can exit at West 95th Street and travel under the parkway via the West 93rd Street underpass. They can then either reenter the northbound parkway lanes or exit at West 95th Street. Drivers exiting the parkway at West 96th Street traveling east pass under Riverside Drive, which is carried over West 96th Street on a decorative 1902 bridge.



Cars entering and exiting at West 96th Street beneath Riverside Drive. March 2006.

BINs:

Name of Feature: Ramp

Location: Southbound from West 96th Street

BIN: 2229311

Date of Construction: 1938

Description: 39.9' out to out, 49' long

Current Owner: New York City

Name of Feature: Ramp

Location: Northbound from West 96th Street

BIN: 2229312

Date of Construction: 1938

Description: 39.9' out to out, 50' long

Current Owner: New York City

Name of Feature: Ramp

Location: Southbound to West 96th Street

BIN: 2229321

Date of Construction: 1938

Description: 40.8' out to out, 50' long

Current Owner: New York City

Name of Feature: Ramp

Location: Northbound to West 96th Street

BIN: 22293212

Date of Construction: 1938

Description: 40.3' out to out, 49' long

Current Owner: New York City

Name of Feature: Ramps

Location: At West 135th Street, two ramps carry traffic over southbound and northbound HHP lanes over West 135th street.

BIN: Southbound, 222933A 21.2' out to out, 630' long

BIN: Northbound, 222933B 21.2' out to out, 576' long

Date of Construction: Unknown

Owner: both owned by New York State Department of Transportation



View of the West 135th Street exit ramps from the West 138th Street access bridge at Riverbank State Park. July 2005

Name of Feature: George Washington Bridge interchange

Location: Hudson River between West 178th Street, Manhattan and Fort Lee, New Jersey

Date of Construction: 1938, 1953, 1962

Description: This is the third major interchange along the HHP. It is a complex network of ramps and bridges connecting I-95 and US 1 (both known as the Trans-Manhattan Expressway), Riverside Drive, and Broadway (US 9). The interchange has been reconfigured numerous times. Between 1938-39, a new approach from the northbound parkway that bypassed Riverside Drive was added; workers also built two new ramps that crossed over Riverside Drive and completed a tunnel approach from West 178th Street to Highbridge Park near the Harlem River Speedway. In 1953, a connection from the bridge to the southbound parkway was completed to avoid a tortuous path that included a hairpin turn and northward detour under the bridge before circling back south to join the southbound parkway lanes. In 1962, three new exits and approaches were added to the parkway. On the Manhattan side, the Trans-Manhattan Expressway runs east from the bridge between West 178th Street and West 179th Street to the Harlem River; it connects both levels of the bridge with Amsterdam Avenue, Harlem River Drive, and the 181st Street Bridge over Harlem River. The expressway also connects directly with the Alexander Hamilton Bridge, which is part of the Cross Bronx Expressway (I-95) and crosses the Harlem River. From both levels, ramps connect to the parkway, Riverside Drive and local streets.

Builder/Engineer/Architect: Port Authority

Current Owner: Metropolitan Transportation Authority

Bin Numbers for George Washington Bridge Interchange:

5522506	Ramp 178 th Street
552250K	Ramp UX
552250C	Ramp 179 th Street
552250A	HR-1
552250F	West Bus Ramp
552250I	East Bus Ramp
5522550O	Bus Station Plaza
5522569	Fort Washington Avenue Bridge
552258O	South Bus Station Ramp
552259O	Broadway Bridge
552257O	North Bus Station Ramp
552260O	Wadsworth Avenue Bridge
552261O	St. Nicholas Avenue Bridge
552262O	Audubon Avenue Bridge
552250E	Bus Turnaround
552251O	HR6, HR11
552253O	Amsterdam Avenue Bridge
552250H	HR-2
552253O	HR-7
552252O	HR-11
5522542	HR-10
552250J	Ramps 3 and 4
5522507	George Washington Bridge, Lower Level
552250B	Ramp LX-2
552250A	Ramp LX-1



Exit ramp to Riverside Drive over southbound HHP. July 2006.

552249O	HR-17
552254A	HR-12
552254I	HR-8
552254B	HR-2, HR-4
5522508	George Washington Bridge Upper Level

Name of Feature: Van Cortlandt Park interchange

Location: HHP at Van Cortlandt Park

Date of Construction: Unknown

Description: A semi-cloverleaf design takes the north and southbound traffic to and from the parkway and Broadway.

Current Owner: New York City



Van Cortlandt Park interchange, view south. July 2005.

Name of Feature: Mosholu Parkway interchange

Location: HHP at Mosholu Parkway

Date of Construction: 1951

Description: This is the fourth major interchange of the HHP. Traffic from Mosholu Parkway converges with the left lane of the two northbound HHP lanes, just beyond the Major Deegan Extension Bridge. The HHP southbound lanes for the Mosholu Parkway diverge into one lane to the left and travel over the bridge. Two lanes continue southbound, with southbound traffic from the Mosholu Parkway entering from the left just south of the bridge.

Current Owner: New York City

GUIDE RAIL TYPES

The HHP features various types of guide rails.

The New York City Parks Department designed the earliest **Art Deco guide rail**. The rail consists of panels overlapping vertical metal bars bent to form arcs that are welded to horizontal metal bars. The height of the rail is 2'-7". Each panel is connected to a 2 7/8" wide post. The end posts are slightly more decorative, featuring a round knob on top. They are found primarily in Riverside Park and appear in a variety of shades of green, from a brilliant turquoise to a pale spring green. The latter color is a recreation of the original hue. It is unknown which guide rails of this type are original and which are reproductions.

Art Deco Guide Rail



Riverside Park, West 79th Street (left). Railing detail at West 94th Street (right). July 2005.

A second original guide rail type is the **spring cable tension guide rail** (no photo) located on the western side of the southbound lanes of the parkway between West 85th and West 96th streets. The third original guide rail type is a low wall of broken range work masonry located just before the Henry Hudson Bridge on the western side of the northbound lanes. There is also a **masonry guide rail** at the Rotunda traffic circle.

Masonry Guide Rail



Riverside Park at
79th Street, traffic
circle. July 2005.

The most common types of guide rails are the galvanized steel **W-beam barriers**, located sporadically along the length of the parkway, and jersey barriers, located along the parkway and medians from West 72nd to 80th streets in Riverside Park and all along the parkway north of Riverside Park. **Jersey barriers** replaced the original timber guide rails used in the Bronx. Wood railings are extant only along a ramp leading onto the northbound parkway at the Manhattan College Parkway Bridge and Van Cortlandt Park Equestrian Bridge, but it is doubtful these are original. **Decorative cast jersey barriers** have been placed along the Greenway Trail near West 120-125th streets.

W-beam Guide Rail



At West 114th Street pulloff on southbound lanes. March 2006.

Jersey Barrier



Parkway at West 252nd Street. July 2005.

Greenway Trail Jersey Barrier



Decorative concrete barriers along the greenway between West 120-125th streets. March 2006.

Henry Hudson Parkway, Contract No. 23, shows spring cable guide rail on northbound lanes north of Dyckman, available at the Olmsted Center. For images of this type, see “90th Street Southbound,” neg #s 25631, 25632, and “125th Street Southbound,” neg #s 25629, in Metropolitan Transit Authority Bridges & Tunnels Archives.

PARKING AREAS AND SCENIC OVERLOOKS

Name of Feature: Parking area

Location: HHP in Riverside Park at West 94th Street

Date of Construction: Unknown

Description: This parking area is located on the west side of the HHP and overlooks the Hudson River. Since it is not currently in use, it has become overgrown with vegetation. The lot features broken Art Deco guide rails in turquoise and w-beam guide rails.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



West 94th street
parking area.
July 2005.

Name of Feature: Parking area and scenic overlook

Location: HHP in Riverside Park at West 99th Street

Date of Construction: Unknown

Description: The refurbished parking area provides a view of the Hudson River and across to New Jersey, as well as the promenade and tennis courts. The ramp leading to the parking area has Art Deco guide rails as well as W-beam dividers. The parking area is paved in tarmac, and there is a new walkway of granite and tarmac with painted black metal picket fencing.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Promenade
along
Hudson
River. July
2005.



West 99th
Street
Parking area.
July 2005.

Name of Feature: Emergency Pulloff

Location: HHP Southbound at West 114th Street

Date of Construction: 1947

Description: As originally designed, the parkway had no emergency pulloffs. In 1947, Charles H. Sells, State Superintendent of Public Works announced that Del Balso Construction Company would construct twenty-six emergency turnouts between the George Washington Bridge and West 72nd Street. The turnouts were to measure approximately 155' long and be separated from the parkway by a 2' wide curb. Originally the pulloffs were paved with blocks but have since been paved in asphalt. Very few survive.

Builder/Engineer/Architect: Del Balso Construction Corporation

Current Owner: New York City Parks Department



West 114th Street Pulloff. March 2006.

A series of six photographs showing emergency turnouts at northbound West 83rd Street, northbound West 88th Street, two of southbound West 90th Street, northbound West 105th Street, and southbound West 125th Street is available at Metropolitan Transit Authority Bridges and Tunnels Archives.

Name of Feature: Riverside Park scenic overlook

Location: Riverside Drive at West 115th to 116th streets

Date of Construction: ca. 1937

Description: In this location, Riverside Drive is on a terrace. Since it sits at a higher grade than the HHP, a retaining wall had to be constructed. A parapet wall clad in the broken range work masonry with granite coping used throughout the park borders the terrace. A pair of light standards shaped like shepherd's crooks light the area. A flight of stairs with a masonry rail and granite coping provide access from the terrace and Riverside Drive to the park below.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Stairway and retaining wall.
July 2005.



Light standard detail.
July 2005.



View of overlook
and retaining wall.
July 2005.

Name of Feature: Shelter and comfort station

Location: Riverside Drive near Grant's Tomb at West 123rd Street

Date of Construction: 1910

Description: The shelter is very similar to Inspiration Point further north. It features Doric columns supporting a coffered wood ceiling, and there are decorative wood brackets. Stairs flank the structure and lead down to restrooms on the bottom floor. A drawing of the west elevation shows that to the left was the men's room and to the right was the women's. Both contained dressing rooms and toilets; there was also an attendant's room and a coal and boiler room. The building is in poor condition, evidenced by scaffolding being used to hold up the damaged roof.

Builder/Engineer/Architect: Theodore Videto, New York City Parks Department architect

Current Owner: New York City Parks Department



View of shelter from Riverside Drive. July 2005.

Drawings: "Riverside Drive Comfort Station," approved 4/13/09, available at the Arsenal, Cabinet 4.

Name of Feature: 149th Street Entry Ensemble

Location: Riverside Drive from West 149th to West 151st streets

Date of Construction: 1911

Description: From West 135th to 158th streets, Riverside Drive has a heavy masonry block retaining wall underneath it, and from West 153rd to 155th streets, the drive cantilevers over the exposed New York Central Railroad tracks. This section was built as part of the 1911 extension of the drive. At West 151st Street, a circular terrace overlooked the park and river. A conical pavilion once topped the rotunda. A set of stairs led down to a hillside terrace, from here the path continued across a pedestrian steel Warren truss bridge over the exposed railroad tracks at W. 151st Street, which was built in 1927. This overlook is the last of four elements from the original Riverside Drive that remains intact (the others were destroyed by the construction of the Riverbank State Park) and may have been the inspiration for the design of the promenades, arches and loggias that appear throughout Riverside Park.

Builder/Engineer/Architect: J.C. Rodgers, builder; George Stuart Williamson, Supervisor

Current Owner: New York City Parks Department



Panorama view of the Entry Ensemble. Photo by Massimo Strino.



Circular terrace. July 2005.



Stairs. July 2005.



Detail of wall. July 2005.

Name of Feature: Inspiration Point

Location: Riverside Drive at West 190th Street

Date of Construction: 1925, pavilion

Description: Inspiration Point was designed as a destination point on Riverside Drive. Located near Fort Tryon Park and the Cloisters, it overlooks the Hudson and Palisades beyond. The structure has Doric columns holding up what was originally a coffered wood ceiling. By the 1980s, the shelter had deteriorated so much that plans were put in place to clean up the area, replace the missing stone, and construct an open trellis on the roof. Although jersey barriers have made it inaccessible from the HHP, it is still heavily used by those on the Hudson Greenway, which passes by the overlook.

Builder/Engineer/Architect: Gustav Steinacher, chief engineer of New York City Department of Parks

Current Owner: New York City Department of Parks



View of Inspiration Point from the road. Courtesy of John Benfatti. April 2005.

ADJACENT HIGHWAYS

Name of Feature: Joe DiMaggio Highway (formerly the West Side Highway, Miller Highway)

Location: West 68-72nd streets, just south of the HHP

Date of Construction: 1929-1936

Description: The West Side Highway, later renamed the Miller Highway (after Manhattan Borough President Julius Miller), was one of the first elevated urban expressways built in America. When it opened, engineers praised it as a roadway that came close to being an ideal highway. Despite the accolades, the highway became obsolete within the first two decades of its existence, a victim of its own design. It had been designed to avoid buildings on either side, so it had narrow lanes, sharp curves and short on- and off-ramps. The city commissioned the usual studies to improve the highway, but without adequate backing and maintenance, the structure slowly deteriorated over the years. The end came on December 16, 1973, when a truck crashed through a section of the highway at Gansevoort Street. In the midst of the 1970s fiscal crisis, the city declined to reconstruct the old West Side Highway (since renamed the Joe DiMaggio Highway). Between 1977 and 1989, the original highway was systematically destroyed and a new one constructed consisting of a surface “boulevard” south of West 57th Street and an elevated portion from West 57th to 72nd streets. The current Joe DiMaggio Highway is built of steel and concrete, with handball courts under the highway at West 71st and 72nd streets. Access steps go from Riverside Park South to West 68th/Riverside Boulevard (where the Trump property is located).

The Empire State Development Corporation is currently seeking approval for its “Miller Highway Project.” To make way for further waterfront development between West 59th and 72nd streets, the company would like to relocate the elevated portion of Route 9A or the Joe DiMaggio Highway (although the report refers to the Miller Highway) eastward into a tunnel. The old Miller Highway remnant at West 72nd Street would be west of the proposed route and thus would be spared. As part of the proposal, New York City Department of Transportation now has permission from the courts to close the northbound parkway exit at West 72nd Street; this will allow developers to connect Riverside Boulevard to West 72nd Street.

Builder/Engineer/Architect: New York City

Current Owner: New York City



View of Joe DiMaggio
Highway, July 2005.



Underside of highway with
handball courts, July 2005.



View of Joe
DiMaggio
Highway. July
2005.

Name of Feature: Miller Highway

Location: West 70th to 72nd streets

Date of Construction: 1929-1936

Description: This is a remnant of the original highway and consists of a riveted steel arched viaduct with open spandrels and exposed girders, all of which have been painted green. Part of the original decking remains as well as two original Art Deco light standards.

Builder/Engineer/Architect: Unknown

Current Owner: New York City

Remnant of
Miller Highway
with Joe
DiMaggio
Highway in
back. July
2005.



Detail from below.
July 2005.

Name of Feature: Riverside Drive

Location: West 72nd Street to Dyckman Street

Date of Construction: Begun 1874, 1934-37

Description: Central Park Commissioner William Martin suggested a park and drive in the area as a way to boost housing development in the 1860s. By 1866, the city had purchased land for a straight drive on the ridge and the hill sloping down to the Hudson for a park. An 1867 plan called for a straight avenue 100' wide on top of the rocky bluffs, which would have required extensive excavating, grading and filling, as well as constructing a very large and expensive retaining wall that would have limited pedestrian access to the park and the river. In 1873, with the success of Central Park behind them, Frederick Law Olmsted and Calvert Vaux drew up an alternative plan that solved the challenging topography problem. Olmsted's plan was for a winding drive that would run for 3 miles and terminate in a circle at the Claremont Inn, which was near Grant's Tomb. They proposed merging the land for the drive with the land for the park, and designed the drive (then called Riverside Avenue) to be a curving road that took advantage of the topography and the spectacular vistas.

The city built the park and drive more or less according to the Olmsted-Vaux plan between 1867 and 1900, and portions of Riverside Drive opened to the public in 1880. In 1902, the viaduct connecting the drive at West 96th Street had been completed. As predicted, the opening of the drive and park was a catalyst for construction of single-family houses and apartment buildings. When first opened, Riverside Drive extended from West 72nd Street to West 125th Street.

The drive had concrete curbs with four courses of masonry blocks alongside the curb. Cast light standards curved like a shepherd's crook with hanging lanterns light the area. Overlooks gave pedestrians the opportunity to pause and gaze out over the Hudson and across the river to New Jersey.

In 1898, a graceful arched steel viaduct was finished that bridged West 125th to 135th streets, where the Manhattan Valley cut made road construction difficult. Francis Stuart Williamson designed the structure. Acquisition of land for the extension of Riverside Drive from West 135th to 158th streets occurred in 1899, 1903, and 1931. By 1911, the extension had been completed. This section included the cantilever over the New York Central Railroad tracks at West 153rd to 155th streets. The cantilever measured 100' long and 50' wide and cost \$250,000. It sat on a masonry block wall with arches. The Board of Estimate put further extension of the drive on hold in 1911, but by 1913, talk had resumed of extending Riverside Drive.

Olmsted and Arnold Brunner presented plans for the extension of Riverside Drive, a great deal of which would be incorporated by Robert Moses in his West Side Improvement plan. The plans included a viaduct at West 158th, where Boulevard Lafayette terminated. Between West 165th and Dyckman streets, the drive would be 60' wide with a sidewalk along its westerly edge.

The early twentieth century saw the construction of memorials and monuments along Riverside Drive up to West 150th Street. This began with the construction of Grant's tomb, where the drive at first terminated in a loop. These are noted separately in the following section of the inventory.

Builder/Engineer/Architect: Frederick Law Olmsted/Calvert Vaux designed the original Riverside Drive; Francis Stuart Williamson designed the viaduct at West 125th to 135th streets; George Stuart Williamson and J.C. Rodgers built the West 135th to 158th section; Robert Moses, Gilmore D. Clark, Clinton Loyd would oversee the construction of the drive from West 158th to its terminus



View of wall with Riverside Drive retaining wall at West 140th St. (top). Original terminus of Riverside Drive at Claremont (now Grant's Tomb), (bottom). July 2005.



There are many historic images of Riverside Drive available at the New York Public Library Digital Gallery and the New York City Parks Photo Archive in the Olmsted Center.

The portion of Riverside Drive from West 72nd Street to 129th Street is listed on the National Register of Historic Places; Riverside Park and Riverside Drive (from West 72nd Street to St. Clair Place) was designated a New York City Scenic Landmark in 1980. Riverside Drive West 80th to 81st Street Historic District and Riverside Drive West 104th to 106th Street Historic District are also listed on the National Register of Historic Places.

RECREATIONAL FACILITIES

Name of Feature: Classic
Playground

Location: Riverside Park at West
75th-76th streets

Date of Construction: 1930s

Description: The playground
features an in-ground fountain and
paired rectangular comfort stations
clad in stone whose windows have
the same decorative ceramic tile
grating as at the Rotunda.

Builder/Engineer/Architect: New
York City Parks Department

Current Owner: New York City
Parks Department



W. 75th St. Comfort station. July 2005.

Name of Feature: Henry Neufeld Elephant Playground

Location: Riverside Park at West 76th Street

Date of Construction: 1930s

Description: The playground has an in-ground fountain consisting of elephant statues
spraying water from their trunks. There are also several basketball courts and a brick
comfort station with a hipped roof.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

View of elephant
fountain. July 2005



West 76th Street. Comfort station. July 2005



79th Street Boat Basin. July 2005

Name of Feature: 79th Street Boat Basin

Location: Riverside Park at West 79th Street

Date of Construction: 1930s

Description: While the Boat Basin has a modern pier, there are also remains of old piers and slips. The basin holds 105 boat slips and has public launch sites and moorings.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Name of Feature: 83rd Street River Run Playground

Location: Riverside Park at West 83rd Street

Date of Construction: 1930s

Description: The gated playground features a stone comfort station.

Builder/Engineer/Architect: New York City

Parks Department

Current Owner: New York City Parks Department



West 83rd Street. Comfort station. July 2005.

Name of Feature: Promenade (noted as Middle Promenade on drawings)

Location: Riverside Park, runs from West 83rd Street to West 91st Street

Date of Construction: ca. 1936-1937

Description: The promenade covers the New York Central Railroad tracks, which previously had created an unsightly barrier to the river. The broken range work masonry cladding the promenade is used throughout the park. The promenade plan showed planting beds edged with granite blocks and circular end points. The plans also directed that from the outside edge of the promenade, there would be a bluestone border, then black top, followed by a grassy area edged in bluestone. The grassy median had grates that served as ventilation for the railroad tracks. On the other side of the median, there would be black top paving and a bluestone border at the edge. A five arch arcade, granite quoins, engaged pillars, and corbelled coping set on top provide ornamentation to the structure's elevation. There are access steps to the Warsaw Ghetto Memorial, which marks the southern end of the promenade. The 91st Street Garden marks the northern terminus.

Built into the promenade was a comfort station at West 89th Street. It had a five arch arcade with granite voussoirs and piers. Tile grilles covered the windows at each end. It was accessed via a flight of stairs from the promenade on top that had bluestone stairs and landings with a bronze handrail. The comfort station contained a men's and women's toilet. The vestibule and toilets had hexagonal tile floors, glazed tile walls, and a hung plaster ceiling.

Builder/Engineer/Architect: New York Central Railroad and New York City Parks Department

Current Owner: New York City Parks Department

Middle
Promenade
from West
83rd to 84th
streets.
July 2005



Drawings: see New York Central Railroad, Roof Covering Over Tracks, W 82nd St to W 94th St, "Architectural Details, Ventilator and Ramp at 83rd St"; New York Central Railroad, Roof Covering Over Tracks, W 82nd St to W 94th St, "Plans and Elevations, Ventilator & Toilet Building, W 89th St," 5/27/36; New York Central Railroad, Roof Covering Over Tracks W 82nd St to W 94th St, "Architectural Plan of Track Covering 82nd St to 88th St," 5/27/36; New York Central Railroad, Roof Covering Over Tracks, W 82nd to W 94th St, "Architectural Plan of Track Covering 88th St to 94th St," 5/27/36, all available at Arsenal and Olmsted Center.

Name of Feature: 91st Street Garden

Location: Riverside Park at West 91st Street

Date of Construction: ca. 1970s

Description: Established in the 1970s by the "Garden People," the garden is at the terminus of the West 83rd to West 91st streets promenade in Riverside Park. A black metal picket fence surrounds the garden and paths extend from the garden to the northeast and northwest.

Builder/Engineer/Architect: Jenny Benitez, a neighborhood activist, along with others, transformed a drug-infested area into a flower, fruit and vegetable garden.

Current Owner: New York City Parks Department



West 91st Street Garden. March 2006.

Name of Feature: 91st Street Hippo Playground

Location: Riverside Park at West 91st Street

Date of Construction: park dates to 1930s, sculpture dates from 1993

Description: Nestled in a shallow valley, the playground is so-named for the fiberglass sculpture of fourteen hippopotami, two of which spray water and create a fountain. The playground also contains brick comfort station with a flat roof edged in metal flashing, wood and metal play equipment, swings, sand pit, and picnic tables and benches. Honey locusts shade the play area.

Builder/Engineer/Architect: sculpture: Robert J. Cassilly Jr.; park: New York City Parks Department

Current Owner: New York City Parks Department



View of hippos with Soldiers and Sailors Monument in background. March 2006.

Detail of comfort station.
March 2006.



Overview of
playground.
March 2006.



Name of Feature: Riverside Clay Tennis Courts

Location: Riverside Park at West 96th Street, between the Hudson River and the HHP

Date of Construction: 1961

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Tennis Courts. July 2005.

Name of Feature: 97th Street Dinosaur Playground

Location: Riverside Park at West 97th Street

Date of Construction: 1930s

Description: The playground is located in a shallow depression along a rather steep slope. Stairs lead down into the playground and flank a comfort station (built between 1934-37) that mimics the arcade of the structure covering the railroad tracks. The comfort station is clad in broken range work masonry and has three arches with granite voussoirs and piers. The playground's name comes from the fiberglass triceratops and hadrosaur in the play area. There is also the typical play equipment, including swings, sandboxes, climbing equipment and a spray shower. Mature London plane trees flank the playground.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

West 97th
Street Comfort
station. March
2006.



Dinosaur
Playground.
March 2006.



Name of Feature: Cherry Walk

Location: Riverside Park at West 99th to 129th streets

Date of Construction: ca. 2001

Description: This pedestrian and cycling route runs between the parkway and the Hudson River and also encompasses the Hudson Greenway trail. It connects with the end of the waterside promenade (running from West 92nd to 99th streets). The walk boasts a row of cherry trees along the western edge of Riverside Park between the parkway and the Hudson River.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Cherry Walk. July 2005.

Name of Feature: Promenade

Location: Riverside Park at West 101st to 110th streets

Date of Construction: 1930s

Description: The promenade was built to cover the railroad tracks from West 101st to 110th streets. The western wall serves as the backdrop for various athletic fields along its base with stairs providing access from the promenade to the fields below. There are two types of façade treatments on the promenade: broken range work masonry and concrete treated to look like clapboard siding. The transition to ashlar masonry was fine point granite quoins. From West 104th to 108th streets, the wall has window openings that allowed railroad passengers to catch glimpses of the river and to provide ventilation. The windows have decorative tile grating, although it is missing in some places. At West 109th Street, the façade treatment is masonry with granite voussoirs and piers. The promenade itself had bluestone paving. The terrace and stairs had bronze hand railings that featured cast bronze supports with a stylized leaf support resting on granite coping.

Built into the promenade at West 101st and 102nd streets was a field house. At the center, the drawings show a loggia with bluestone paving. It was entered via three bronze doors with ashlar masonry around the openings. To the left was the boys toilet with a directors room and closet, while the girls toilet, also with the directors room and closet was to the right. The boys and girls toilets had glazed tile floors, rough tile and stone walls and furred plaster ceilings. The director's room had a cement floor and tile walls. There was also a relay room with a cement floor, concrete walls and exposed concrete ceiling.

The field house at West 105th Street was also built into the promenade. A loggia with five arches on the exterior with granite voussoirs and paved in bluestone separated the north and south buildings. They were entered via doors off the loggia. Men used the north building. It had relay and heater rooms. At the rear were showers, a dressing room, men's toilet and an attendant's room. Women used the south building, which was identical to the men's. Stairs provided access from the promenade. At the landing was an arch with a granite voussoir and lamps on each side.

There was a third field house located at West 109th Street with toilets for men and women separated by a bluestone-paved loggia.

Builder/Engineer/Architect: New York Central Railroad/New York City Parks Department

Current Owner: New York City Parks Department



Clapboard promenade wall with windows, West 103rd-104th streets. July 2005.



Top of promenade at West 110th Street vicinity. July 2005.

Drawings: New York Central Railroad, Roof Covering Over Tracks, W 98th St to W 111th St, "Architectural Plans and Elevations, Field House & West Wall 101st St to 102nd St," 8/1/36; New York Central Railroad, Roof Covering Over Tracks, W 98th St to W 111th St, "Architectural Sections and Details, Field House at W 105th Street," 8/1/36; New York Central Railroad, Roof Covering Over Tracks, W 98th St to W 111th St, "Architectural Details of Ventilators, Stepped Ramps, Etc., Field House at W 105th St," 8/1/36; New York Central Railroad, Roof Covering Over Tracks W 98th St to W 111th St, "Field House at West 109th," 8/1/36, all available at the Arsenal and Olmsted Center.

Name of Feature: Soccer field and track

Location: Riverside Park at West 101st-102nd streets

Date of Construction: 1937

Description: Stairs lead from the promenade down to the soccer field, which is surrounded by a 267-meter track. The walls of the promenade are clad in broken range work masonry and form the backdrop to the fields. A field house was built into the promenade, signaled by the three arch arcade with granite voussoirs. Six doorways with the original bronze doors provide access to the field house. The soccer field has a manicured edge of London planes and bushes and a black chainlink fence. A gravel path runs between this and a 1930s-era black painted iron fence, which has been replaced in some areas by aluminum sectional fencing. There is a grassy patch of about 8' with London planes between the iron fencing and a W-beam guide rail that runs along the parkway.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Recreational fields and covered railroad tracks with arched openings and stairs leading to top, which featured a pedestrian promenade. July 2005.

Name of Feature: Baseball fields (as of summer 2005, undergoing reconstruction)

Location: Riverside Park at West 103rd-104th streets

Date of Construction: 1930s

Description: The promenade serves as the backdrop to the ball fields. It is faced in concrete treated to look like clapboard siding. Vines were planted along the wall in accordance with drawing specifications. This section features two arched windows to the tracks with concrete voussoirs as well as stairs leading up to the pedestrian promenade. A combination of chain link fencing, W-beam guardrails, and 1930s-era metal picket fencing separates the parkway from the fields. The area also features Robert Moses-era concrete and wood benches, some without the wood seating. An allee of London planes divides the adjacent volleyball court area from the baseball fields.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Path and fencing between fields and parkway.
July 2005.

Concrete clapboard promenade wall.
July 2005.



Promenade wall and London plane allee. July 2005

Name of Feature: Hudson Beach Volleyball & Seasonal Café

Location: Riverside Park at West 105th-106th streets

Date of Construction: 1930s

Description: The promenade forms the backdrop to the café. Stairs lead from the promenade level to the café, which overlooks the volleyball courts. The café occupies a five arch arcade that has granite voussoirs and piers, which originally served as field house. A terrace overlooking the courts provides outdoor seating. A set of bluestone and granite steps in an elliptical shape accesses the sand volleyball courts.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Café with arch motif and rusticated stonework. July 2005.



Promenade covering railroad tracks with arched opening. Note stonework on left and concrete louver cladding on right. July 2005.



Volleyball court. July 2005.

Name of Feature: Ball field, under reconstruction

Location: Riverside Park at West 106th-108th streets

Date of Construction: 1930s

Description: The concrete promenade wall has been treated to look like clapboards and provides the backdrop for the ball fields. There are comfort stations built into the wall. The wall in the location of the comfort stations features the typical broken range work masonry, beveled granite coping, and arcade with granite voussoirs and pilasters that is seen throughout the park.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Concrete clapboard wall and field under construction. July 2005.



Masonry wall with triple arcade covering railroad tracks. July 2005.



Name of Feature: Skate park

Location: Riverside Park at West 110th Street

Date of Construction: Unknown; wall and overlook date from 1930s

Description: The promenade in this section is clad in broken range work masonry. There is an overlook paved in bluestone and bordered by a black metal handrail set in granite capstone. A flight of stairs leads down to the skate park. An allee of London planes separates the park from the parkway as well as the park from the nearby ballfields. A chainlink fence runs along the skate park with a 1930s-era fence along the parkway.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Overlook featuring typical masonry construction, skate park to left.
July 2005.

Name of Feature: Basketball courts

Location: Riverside Park at West 111th-112th streets

Date of Construction: Unknown; wall and access stairs date from 1930s

Description: A flight of stairs provides access from the end of the promenade to the basketball courts, which are located adjacent to the northbound lanes of the HHP.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks

Basketball courts
with parkway in
background. July
2005.



Typical masonry wall and
steps leading down to
basketball courts. July
2005.

Name of Feature: Over the Tracks Tennis Courts (no photo)

Location: Riverside Park at West 119th Street

Date of Construction: 1930s

Description: The tennis courts are screened from the parkway by plantings.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Name of Feature: Claremont Dolphin Playground

Location: Tiemann Place at Riverside Park

Date of Construction: reconstruction project completed in 1998

Description: The playground is so-called because of the dolphin fountain feature and because of the Claremont Inn, which stood in this vicinity and marked the original terminus of Riverside Drive. The playground features play equipment, a spray shower and fountain, a boat-shaped sandbox and a peregrine falcon shaped weathervane.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Dolphin Playground view. July 2005.

Name of Feature: Riverside Valley Community Garden

Location: Riverside Park at West 138th-139th streets

Date of Construction: Unknown

Description: The garden is located between Riverside Drive and the railroad with the HHP above and to the west. A nearby overpass goes to the southern end of Riverbank State Park.

Builder/Engineer/Architect: Community, Jenny Benitez

Current Owner: New York City Parks Department

Riverside Valley Community Garden with overpass in background. July 2005.



Retaining wall of Riverside Drive showing typical masonry construction. July 2005.



Name of Feature: Riverbank State Park

Location: West 137th-145th streets

Date of Construction: 1980s

Description: The park sits on the roof of an arcaded concrete structure of the North River Water Pollution Control Plant that echoes the arcaded wall of Riverside Drive to the west. Construction of the control plant began in 1972, and preliminary sewage treatment operations began in 1986, marking the first time in New York City history that raw sewage was not dumped into the Hudson River. Philip Johnson originally was to have been the architect, and Riverbank State Park would have had four fountains and a reflecting pool. Instead, the park features active recreational facilities like a baseball field, tennis courts, playgrounds, swimming pool, track and skating rink. There is also a cultural center, café and waterfront amphitheater. Riverbank State Park is the only state park facility in Manhattan. It also has the distinction of being the only park built on top of a sewage treatment plant outside of Tokyo. Two steel girder bridges access the park: one at West 138th and the other at West 145th.

Builder/Engineer/Architect: Richard Dattner

Current Owner: New York State Parks



Main entrance at Riverbank State Park
Courtesy of John Benfatti. April 2005.

Name of Feature: Palisades Tot Lot

Location: Riverside Park at West 148th Street

Date of Construction: unknown

Description: This is one of several tot lots along Riverside Drive in the park. They are also located at West 112th, West 110th, West 105th, and West 117th streets.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Palisades Tot Lot.
July 2005.



Name of Feature: Ten Mile River Playground (no photo)

Location: West 148th Street vicinity

Date of Construction: reconstruction project, 1995

Description: The playground's name comes from its location 10 miles north of the southern tip of Manhattan. It features play equipment, basketball and volleyball courts, and baseball fields. There is also a spray shower and two bronze beaver statues that memorialize the fur trade that took place on the Hudson River.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Name of Feature: Fort Washington Park (no photo)

Location: West 155th to Dyckman streets

Date of Construction: 1894, land taken for original park; added to in 1919, 1925, 1926

Description: Fort Washington Park encompasses over 158 acres and includes the site of Fort Washington (used during the Revolutionary War). It is located in what is now called Washington Heights and is adjacent to the famous landmarks of the George Washington Bridge and the Little Red Lighthouse. The park now contains baseball fields, basketball and tennis courts, and a playground. The Hudson Greenway trail extends through the park.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department

Name of Feature: Fort Tryon Park

Location: near Dyckman Street

Date of Construction: 1935

Description: John D. Rockefeller, Jr. bought the C.K.G. Billings estate, which stood in the location of what is now Fort Tryon Park, in 1917. Rockefeller commissioned Frederick Law Olmsted, Jr. to design a park there in 1925. Development of the estate slowed after there were outcries over Rockefeller's wish to demolish the mansion on the property. In 1926, the mansion burned, so the city finally took the donation of the estate from Rockefeller. The city had the 67-acre public park, called Fort Tryon Park, finished in 1935. The name came from the preserved remnants of Fort Tryon, a Revolutionary War fort named after Sir William Tryon, Major General and the last British Governor of the colony of New York. The park also contains Corbin Place, at the ridge road entrance to the Cloisters, which commemorates the area where Margaret Corbin took over fighting the British when her husband was killed in the Revolutionary War battle.

The medieval branch of the Metropolitan Museum of Art, known as the Cloisters, is located at the park. The park does not contain the active recreational facilities of Riverside Park, but it does have 8 miles of pedestrian paths, unparalleled views of the Hudson and Palisades across, two playgrounds, and a pavilion with a café. There is also an Art Deco flagpole base with an eagle adorning it, and a monument to Margaret Corbin, for whom the park drive is named. The architecture of the park complements the medieval architecture of the Cloisters by utilizing heavy masonry blocks. The masonry-faced café has casement windows and a hipped roof.

Builder/Engineer/Architect: Guy Lowell, Olmsted Brothers

Current Owner: New York City Parks Department

Fort Tryon
monument.
March 2006.





Pavilion. March 2006.

Pedestrian paths and
Palisades beyond.
March 2006.



March 2006.

Fort Tryon Park was designated a New York City Scenic Landmark in 1983 and is listed on the National Register of Historic Places.

Name of Feature: Traffic light posts

Location: HHP Northbound at entrance to Fort Tryon Park & near Cloisters

Date of Construction: 1925

Description: These two cast iron traffic light posts survive from the Riverside Drive extension to Fort Tryon Park, completed in 1925. One is located at the Fort Tryon entrance, the other a few hundred yards further north, below the Cloisters. They can be seen from the HHP northbound lanes, and are accessible along the Hudson Greenway between Dyckman Street and West 181st Street.

Builder/Engineer/Architect: City of New York

Current Owner: New York City Parks Department

Traffic light posts, ca. 1925, at the entrance to Fort Tryon Park (left) and in the shadows of the Cloisters (right). The detail of the base proclaims "Property of the City of New York." March 2006.



Name of Feature: Dyckman Street Marina

Location: Dyckman Street

Date of Construction: 1980s-90s

Description: Located along the eastern shore of the Hudson at the end of Dyckman Street, the marina has sixteen slips and thirty moorings, and a restaurant concession called La Marina.

Builder/Engineer/Architect: Unknown

Current Owner: Dyckman Marine Group, Inc., concessionaire



Marina entrance. March 2006.

Name of Feature: Inwood Hill Park

Location: From Dyckman Street to the Harlem River Ship Canal

Date of Construction: created in 1916

Description: The park encompasses 196 acres made up from lands bought by the New York City Parks Department from institutional and private owners and includes the Hudson Greenway trail. The park contains soccer and baseball fields, tennis courts, and trails, but its natural features are its biggest draw: two ridges with a valley between, veins of marble and schist, glacial potholes, Manhattan's only extant salt water marsh, and a network of wetlands. There are also American Indian caves in the park. The Dyckman and Nagel families obtained the land that now makes up Inwood Hill Park from its original inhabitants, the American Indians, and transformed it into farmland. During the Revolutionary War, the area saw battle. In 1834, Samuel Thomson bought most of the land. It was then used as summer homes for the wealthy, and in the early 1900s, there were also hospitals, asylums, and homes. Land acquisition for the park occurred from 1916 to 1941.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



Hudson Greenway trail winds along the hillside in Inwood Hill Park. March 2006.

Name of Feature: Henry Hudson Memorial Park

Location: West 227th Street and Spuyten Duyvil

Date of Construction: 1938; rehabilitation in 1989 and 1995

Description: The park contains the 16' bronze figure of Henry Hudson atop a 100' column, funding for which came from the Henry Hudson Parkway Authority. The base of the pedestal features bas-reliefs in addition to an inscription detailing its construction date and funding source. The statue had been planned since the Hudson-Fulton celebration of 1909, but it was not completed until 1938 when the Henry Hudson Parkway Authority, under the direction of Robert Moses, pushed it to completion. Karl H. Gruppe sculpted the monument using a model created by Karl Bitter, who due to the delay in construction was not able to sculpt it himself since he died in 1915. The park contains paths and benches, playgrounds and baseball fields.

Builder/Engineer/Architect: Karl Bitter, designer; Karl H. Gruppe, sculptor

Current Owner: New York City Parks Department

Henry Hudson
Statue. March
2006.





Henry Hudson statue. March 2006.

For images, see X-80, neg. 13061.1, ca. 1937; for construction of pedestal with scaffolding, see X-80, neg. 13062, January 3, 1938; and for completed statue, see X-80, neg. 21004, October 9, 1941, all at NYC Parks Photo Archive, the Olmsted Center.

For drawings, see Henry Hudson Parkway Authority, "Henry Hudson Memorial Park," Contract No. 21, the Olmsted Center.

Name of Feature: Van Cortlandt Park

Location: Bronx, just before Westchester County line

Date of Construction: Unknown

Description: The 1100-acre park contains recreational facilities, an historic house (Van Cortlandt Manor), an equestrian center and bridle paths, a golf course, sports fields, and trails. There is also a lake created by owner Jacobus Van Cortlandt who dammed Tippet's Brook, and a 43-acre level field used as militia parade grounds and athletic fields.

Builder/Engineer/Architect: New York City Parks Department

Current Owner: New York City Parks Department



View of trail through Van Cortlandt Park from the Equestrian Bridge over HHP.

STRUCTURES AND MONUMENTS



Conservation area with pier remains in background. July 2005.

Name of Feature: Pier D
Location: West 68th Street,
Hudson River, Riverside South
Date of Construction:
Unknown
Description: The twisted steel
remains of Pier D are all that
survive from a fire that occurred
in 1977. It now serves as a
conservation ornamental grass
area with a boardwalk that passes
through the salt marsh grasses.
Builder/Engineer/Architect:
Unknown
Current Owner: New York
City Parks Department

Name of Feature: Pier
Location: West 70th Street, Riverside Park South
Date of Construction: Unknown
Description: A 750' recreational pier was built on top of the remains of the original
wooden shipping Pier 1.
Builder/Engineer/Architect: Unknown
Current Owner: New York City Parks Department



View of transfer bridge remnants. July 2005.

Name of Feature: Gantry crane and Transfer Bridge

Location: West 69th streets, Riverside South

Date of Construction: 1911

Description: This is the remains of the transfer bridge or float bridge (also known as “car floats”) of New York Central Railroad and Hudson River Railroad (Float Bridge #4) that was designed to take freight cars from the waterside rail yards to barges and vice versa. These were hinged bridge decks suspended by cables from the housing structure overhead. Motors inside the housing lifted and lowered the decks to align them with the floats. This is last remnant of an extensive rail yard site in this vicinity that was shut down in the 1970s.

Builder/Engineer/Architect: James B. French and New York Central Railroad

Current Owner: New York City Parks Department

The site was listed on the National Register of Historic Places in 2003.

Name of Feature: Eleanor Roosevelt Memorial

Location: Riverside Drive at West 72nd Street

Date of Construction: 1996

Description: The bronze statue depicts Eleanor Roosevelt leaning against a rock in a meditative pose and is located near the intersection of Riverside Drive with West 72nd Street, serving as a sort of gateway to the park. The site was chosen because of its proximity to the alleged site she took her son to see the shanty towns set up during the Depression.

Builder/Engineer/Architect: Sculpted by Penelope Jencks

Current Owner: New York City Parks Department



Eleanor Roosevelt Memorial. March 2006.

Name of Feature: Robert Ray Hamilton Fountain

Location: Riverside Drive at West 76th Street

Date of Construction: 1906

Description: The fountain is a good example of City Beautiful architecture. It was built in honor of Robert Ray Hamilton, property owner, political activist, sportsmen and big game hunter, who left \$9,000 to the city after his death for its construction. Located in a stone masonry retaining wall that fronts Riverside Drive, the Tennessee marble fountain features an eagle with spread wings sitting atop fanciful flora/fauna carvings. Beneath the eagle is a carved coat of arms flanked by more faunal carvings. A creature's head underneath the coat of arms spits water into a small shell-shaped basin that in turn spills over into the main basin at sidewalk level. This basin has a decorative carved rim and holds aquatic plants. Short pillars with spheres on top flank the sides of the fountain and transition from the parapet wall in which the fountain is set to the carvings of the fountain itself.

Builder/Engineer/Architect: Warren and Wetmore, architects of Grand Central Terminal, New York Yacht Club, and various Vanderbilt-owned hotels

Current Owner: New York City Parks



Hamilton Fountain. March 2006.

Name of Feature: Warsaw Ghetto Memorial

Location: Riverside Park at West 83rd Street

Date of Construction: 1947

Description: The circular memorial plaza has a granite plaque dating from 1947, underneath of which are two boxes with dirt from the Czechoslovakian concentration camps of Terezin and Sered.

Builder/Engineer/Architect: Unknown

Current Owner: New York City Parks Department

Name of Feature: Soldiers and Sailors Monument

Location: Riverside Park at West 89th and 90th streets

Date of Construction: 1902

Builder/Engineer/Architect: Charles and Arthur Stoughton designed the memorial, which is based on the Hellenistic Monument of Lysicrates in Athens. Paul E. Duboy carved the features.

Current Owner: New York City Parks Department



Soldiers and Sailors Monument. July 2005.

Name of Feature: Firemen's Memorial

Location: Riverside Drive at West 100th Street

Date of Construction: 1913

Description: A memorial committee and public funds from the Board of Estimate and Apportionment funded the construction of the memorial. It consists of a wide set of stairs leading to a plaza on which rests the imposing memorial of Knoxville marble. The rectangular memorial has decorative molding around the top and then a bronze bas-relief depicting a horse-drawn fire wagon racing to put out a fire. This is a 1950s replica of the original. Below the bas-relief is a small carving through which water trickles into a basin below. On either side of the central memorial to the north and south are sculptures depicting Duty and Sacrifice.

Builder/Engineer/Architect: H. Van Buren Magonigle designer, Attilio Piccirilli sculptor

Current Owner: New York City Parks Department



Firemen's Memorial with steps. March 2006.

Name of Feature: Franz Sigel Monument

Location: Riverside Drive at West 106th Street

Date of Construction: 1907

Description: The bronze statue depicts Franz Sigel astride a horse. It sits atop a granite pedestal. Sigel (1867-1915) was a military officer, educator, journalist and public servant.

Builder/Engineer/Architect: Karl Bitter, sculptor

Current Owner: New York City Parks Department



Franz Sigel Monument. March 2006.

Name of Feature: Peter Jay Sharp Volunteer House

Location: Riverside Park at West 107th Street

Date of Construction: ground floor completed in 1895; upper level constructed in 2003

Description: Tucked inside the Olmsted part of Riverdale Park is the Peter Jay Sharp Volunteer House. The ground floor dates to 1895, making it the oldest structure in the park, while the upper level was built in 2003. Volunteer Paul Kittas spearheaded the effort to clean up the house with the assistance of the Riverside Park Fund. The house was completely renovated, with the façade left intact but the interior gutted. The first floor serves as a tool shed, the mezzanine has a library and plant propagation area, and the second floor serves as a meeting room.

Builder/Engineer/Architect: Unknown

Current Owner: New York City Parks Department



Sharp Volunteer House. July 2005.



Name of Feature: Samuel Jones Tilden Statue

Location: Riverside Drive at West 112th Street

Date of Construction: 1926

Description: Tilden was an attorney, Governor of New York, and philanthropist whose book collection formed the basis of the New York Public Library. The bronze sculpture sits on a small terrace surrounded by a low granite wall and benches. The statue depicts Tilden standing with his hand touching, appropriately enough, a book sitting on a stand. The pedestal under the statue gives a brief biography of Tilden.

Builder/Engineer/Architect: William Ordway Partridge

Current Owner: New York City Parks Department

Tilden Statue. March 2006.

Name of Feature: Lajos Kossuth Statue

Location: Riverside Drive at West 113th Street

Date of Construction: 1928

Description: The statue commemorates the movement for Hungarian independence from the Austrians. The figure of Lajos Kossuth stands atop a Milford pink granite pedestal and points downward to two male figures representing the Austrian regime and the newly freed Hungary in the form of a soldier and peasant. The pedestal is inscribed: "Erected by a liberty loving race of Americans to Louis Kossoth [sic] the Great Champion of Liberty."

Builder/Engineer/Architect: Janos Horvai, sculptor

Current Owner: New York City Parks Department

Kossuth Statue. March 2006.



Name of Feature: Woman's Health
Protective

Association Fountain (WHPA)

Location: Riverside Drive at West 116th
Street

Date of Construction: 1910

Description: Located on a terrace overlooking Riverside Park, the marble stele and drinking fountain commemorates the twenty-fifth anniversary of the WHPA in 1910. The stele features a low bas-relief of two female figures with an inscription, below which protrudes the basin of the drinking fountain.

Builder/Engineer/Architect: Bruno Louis Zimm, sculptor

Current Owner: New York City Parks Department



WHPA Fountain. March 2006.



Name of Feature: Riverside Church

Location: West 120th Street

Date of Construction: 1926-36

Description: Charles Collens and Henry C. Pelton, the architects, designed the church with elements of Gothic architecture from France and Spain and based it on a thirteenth-century cathedral in Chartres, France. The church has a carillon of seventy-four bells that John D. Rockefeller Jr. donated.

Builder/Engineer/Architect: Charles Collens of Allen & Collens, Henry C. Pelton

Riverside Church. July 2005.

Riverside Church was designated a New York City Landmark in 2000.

Name of Feature: General U.S. Grant National Monument (Grant's Tomb)

Location: Riverside Park at West 122nd Street

Date of Construction: dedicated 1897

Description: The granite tomb with marble ornamentation is a scaled back version of John Duncan's original plans.

Current Owner: National Park Service



Grant's Tomb. July 2005.

For more information, see HABS No. NY-5429. It was designated a New York City Landmark in 1975.

Name of Feature: Studebaker Building

Location: West 131st and 132nd streets

Date of Construction: 1923

Description: The building is constructed of brick and white terracotta/porcelain with blue Studebaker logos visible at the southwest corner of the roof. Centered on the west side of the building is a large elevator shaft, a remnant from when the building was used by Studebaker and the elevator would have moved cards and parts. The building now houses various Columbia University offices and art studios, as well as Madame Alexander Doll Company and Hospital and the American Museum of Natural History warehouse.

Builder/Engineer/Architect: W.S. Ferguson

Current Owner: AB Partners LLC



Ellison Memorial. July 2005.

Name of Feature: Ralph Ellison Memorial

Location: Riverside Drive at West 150th Street

Date of Construction: dedicated 2003

Description: This is the newest addition to the monuments lining Riverside Drive. The memorial is a 15' high bronze sheet with a cutout of a man's profile in the center. The location of the memorial is important since it faces the apartment building in which Ellison lived for more than thirty years.

Builder/Engineer/Architect: Elizabeth Catlett, sculptor

Current Owner: New York City Parks Department

Name of Feature: Trinity Cemetery

Location: Riverside Drive at West 153rd and 155th streets

Date of Construction: 1843

Description: John James Audubon, who formerly owned the land is one of many famous New Yorkers buried in the cemetery. It is located immediately adjacent to Riverside Drive.

Builder/Engineer/Architect: Unknown

Current Owner: Trinity Church, Manhattan

Name of Feature: Little Red Lighthouse (also known as Jeffrey's Hook Lighthouse)

Location: Under George Washington Bridge, Fort Washington Park

Date of Construction: 1880, reconstructed and moved 1921, deactivated 1947

Description: Located on Jeffries Point in Fort Washington Park at the base of the George Washington Bridge, the bridge is difficult to see from parkway. The U.S. Coast Guard built the lighthouse at Sandy Hook, New Jersey, and it was moved to its present location in 1921. Hildegard Swift's 1951 book, *Little Red Lighthouse and the Great Grey Bridge* helped save the lighthouse from being dismantled by the U.S. Coast Guard.

Builder/Engineer/Architect: U.S. Coast Guard

Current Owner: New York City Parks Department



Little Red Lighthouse.
March 2006.

The lighthouse was designated a New York City Landmark in 1991.



Bus Station. July 2005.

Name of Feature: Bus Station Plaza

Location: George Washington Bridge Bus Terminal

Date of Construction: 1963

Builder/Engineer/Architect: Pier Luigi Nervi (1891-197) was an Italian civil engineer who experimented with building in reinforced concrete.

Current Owner: Metropolitan Transportation Authority

Name of Feature: Castle Village Apartments

Location: Henry Hudson Parkway at West 181st Street

Date of Construction: 1938

Description: The apartments sit on the original site of Charles Paterno's "Castle". Designed by John C. Watson and constructed between 1907-09, Paterno Castle reportedly had rooms of various motifs. The property encompasses 7 acres, with the crenellated retaining wall holding back the ridge on which the castle had been placed. In 1938, Paterno demolished the castle and built the Castle Village Apartments for \$6 million, which consisted of five 13-story apartment towers. This shift from mansion to apartment houses was typical of the area after the construction of the parkway. Portions of the retaining wall collapsed in May 2005.

Builder/Engineer/Architect: Charles Paterno

Current Owner: Unknown



View of wall and Castle Village Apartments. July 2006.

Name of Feature: The Cloisters

Location: Fort Tryon Park

Date of Construction: opened in 1938

Description: The museum holds the medieval arts branch of the Metropolitan Museum of Art. John D. Rockefeller Jr. purchased the medieval art collection of sculptor George Grey Bernard and donated it to the museum. He also purchased 700 acres of the New Jersey shoreline visible across the Hudson River and donated the land as a public park in order to maintain the natural view of the Palisades from the Cloisters. Charles Collens of Allen, Collens and Willis of Boston along with museum staff designed the building and supervised its construction. The building used architectural elements from five French cloisters in addition to an original chapter house and a reconstructed chapel, all dating from the twelfth to fifteenth centuries.

Builder/Engineer/Architect: Charles Collens

Current Owner: Metropolitan Museum of Art



The Cloisters. February 2006.

The Cloisters was designated a New York City Landmark in 1974. It is also listed on the National Register of Historic Places.

Name of Feature: Riverdale Presbyterian Church and Manse

Location: 4765 Henry Hudson Parkway

Date of Construction: 1863-64

Description: Local property owners funded the construction of this Gothic Revival stone church. The adjoining stone manse is known as the Duff House. The Edgehill Church of Spuyten Duyvil (formerly called Riverdale Presbyterian Chapel and located at 2550 Independence Avenue) was originally a chapel of the Riverdale Presbyterian Church. It was designed by Francis H. Kimball, 1888-89.

Builder/Engineer/Architect: James Renwick, Jr.



Edgehill Church
of Spuyten
Duyvil. July
2005.

The church and manse were designated New York City landmarks in 1966 and are also listed on the National Register of Historic Places. Edgehill Church of Spuyten Duyvil was designated a New York City landmark in 1980 and is listed on the National Register of Historic Places.

Name of Feature: Bell Tower War Memorial

Location: West 239th Street, Riverdale Avenue, Henry Hudson Parkway, in Bell Tower Park

Date of Construction: Tower, 1930; bell, 1762

Description: The memorial predates the parkway. It was repositioned from a site along the Spuyten Duyvil Parkway. The blue stone pavement is in disrepair. There is a bronze plaque that lists the names of WW II servicemen from Riverdale, Kingsbridge, and Spuyten Duyvil.

Builder/Engineer/Architect: Dwight James Baum (1886-1939) designed the tower.

Current Owner: New York City Parks Department



Memorial from road.
July 2005.

Name of Feature: Christ Church

Location: 5030 Henry Hudson Parkway, near West 252nd Street

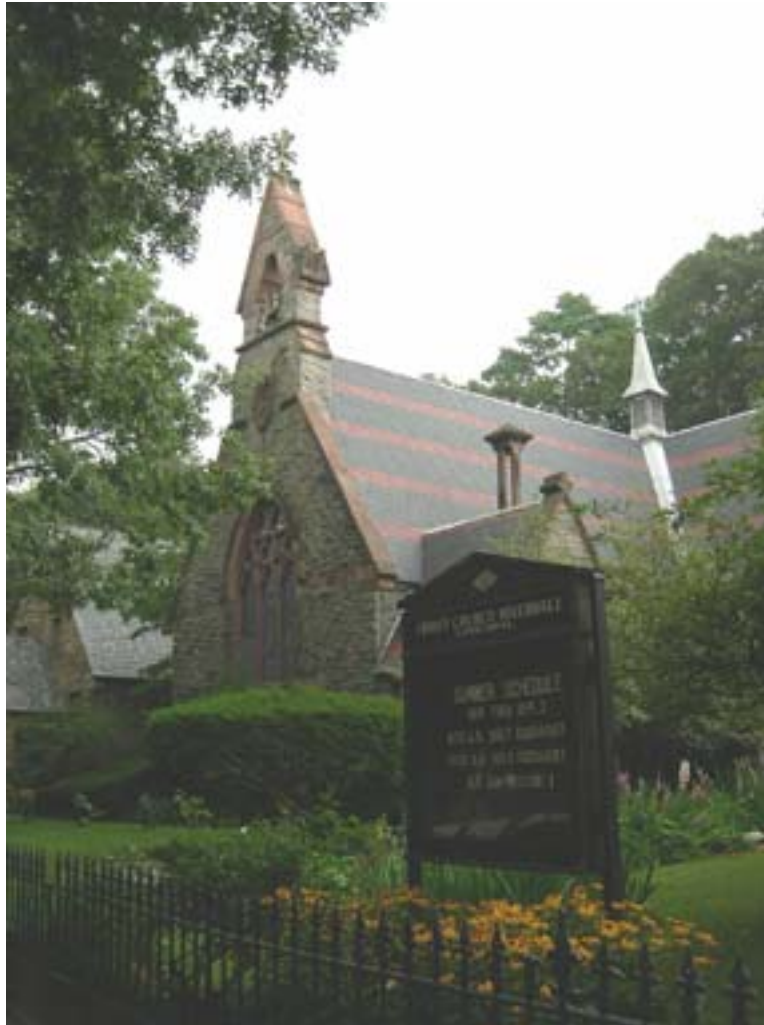
Date of Construction: 1866

Description: The Victorian Gothic church features a slate polychrome roof restored in the early 1990s.

Builder/Engineer/Architect: Richard Upjohn

Current Owner: Episcopal Church

Christ
Church.
July 2006.



The church was made a New York City Landmark in 1967 and listed on the National Register of Historic Places in 1983.

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Museum of the City of New York
1220 Fifth Avenue
New York, NY 10029

Renderings:

"Riverside Drive Extension, Cross Section about 1000 Feet South of Dyckman Street," rendering, Frederick Law Olmsted (Landscape Architect) and Arnold W. Brunner (Architect), in Riverside Drive, 130th St-End.

"Riverside Drive Extension, Cross Section about 2300 Feet South of Harlem River," rendering, Frederick Law Olmsted (Landscape Architect) and Arnold W. Brunner (Architect), in Riverside Drive, 130th St-End.

"Riverside Drive Extension, Study for Treatment of Concourse at North End of Inwood Hill," rendering, Frederick Law Olmsted (Landscape Architect) and Arnold W. Brunner (Architect), in Riverside Drive, 130th St-End.

"Riverside Drive Extension, Study for Treatment at Inspiration Point," rendering, Frederick Law Olmsted (Landscape Architect) and Arnold W. Brunner (Architect), in Riverside Drive, 130th St- End.

Photographs:

“Staircase to Riverside Park at 152nd St,” photograph, in Riverside Drive, 130th St-End.

Postcards:

Riverside Drive North from 145th St., New York, Postcards, Box 11B, Riverside Drive

Riverside Park and Hudson River, Showing U.S. Men O’War at anchor, New York, Postcards, Box 11B, Riverside Drive.

Riverside Drive Viaduct, Postcards, Box 11B, Riverside Drive.

Riverside Drive North from 101st St, New York, Postcards, Box 11B, Riverside Drive.

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John Reddick Postcard Collection

Parks Photo Archive, City of New York Parks & Recreation, The Arsenal, Central Park, New York, New York.

Squatter Shack, Texas Leasehold Estate, photo by Alajos Schuzler, 4/34, neg. # 3022.

West Side Improvement, View North from 135th Viaduct, 6/1/35, neg. # 3028/5749.

West Side Improvement, South from 153rd Street Viaduct, 6/1/35, neg. # 3039/5759.

Landfill Operation, 95th Street, Top of Hill, photo by Alajos Schuzler, neg. # 3011/5732.

View South from 85th Street, Birds Eye, 5/11/37, neg. # 11583.

View North from 79th Street, 5/11/37, neg. # 11581.

View North from S + S Mountain, 5/11/37, neg. # 11585.

100th Street Progress on West Side Highway, Looking North from 100th Street, photo by Max Ulrich, 5/11/37, neg. # 11587.

West Side Improvement Comparative Plan Drawing, 1891-1910-1937, 9/30/37, neg. # 12846.

Robert Moses Opening Ceremony, 79th Street Rotunda, 10/12/37, neg. # 12870.

View North from 145th Street, 5/16/38, neg. # 13471.

Airmap, 8/19/38, neg. # 14902.

View North, 6/2/39, neg. # 16982.

Riverside Drive Viaduct, Signs, photo by Max Ulrich, 10/1/39, neg. # 17546.

General View North, 3/7/40, neg. # 18331.

No caption, 8/24/40, neg. # 19339.

Henry Hudson Parkway, Cut & Cover for Existing Railroad Tracks, 10/27/44 (?), neg. # 23692.

George Washington Bridge Interchange, photo by Flying Camera, Inc., 8/56, neg. # 2911.

Aerial in location of 150s streets, with polo grounds, no date.

Drawings, City of New York Parks & Recreation, The Arsenal, Central Park, New York, New York. When applicable, cabinet number has been given. The New York Central Railroad drawings are also located at the Park archives at the Olmsted Center but are bound and therefore not accessible for copying.

New York Central Railroad, West 186th St to 191st St, Duffy Construction
Company Contractor, 3/25/37-1/7/38.

102nd St Field House Plans

109th St Field House Plans

New York Central Railroad, West 135th St to 146th St, PT Cox Construction
Company Contractor, 5/7/37-5/13/38.

New York Central Railroad, West 98th St to 111th St, Del Balso Construction
Company Contractor, 9/23/36-12/21/38.

Circuit Breaker House, #58, probably one located 111th St.

New York Central Railroad, Roof Covering Tracks, West 82nd St to 94th St.

Pedestrian Underpass at 83rd St, 3 drawings of details.

New York Central Railroad, West 82nd St to 94th St, Poirier & McLane
Corporation Contractor, 7/26/36-1/26/38.

Reconstruction of the Docks, 79th St Marina, 1993-1994.

West 100th St to St. Clair Place, grading and landscaping.

Riverside Park Section 11, West 100th St to 155th St, 8/16/67.

Contract Plan for the Construction of a Steel Viaduct and Approaches in
Riverside Drive West from West 155th to West 161st St, authorized by
Board of Estimate, 6/5/25.

Reconstruction of Fort Washington, shows grading, planting, tennis courts, plans.

Restoration of Stone Parapet Walls, Teaco Construction Company Contractor,
took place northbound at West 72nd St and northbound at 93rd St.

Henry Neufeld Playground, 8/24/90 and 5/22/90, Cabinet 11.

148th St tot lot and playground, Cabinet 11.

Riverside Park Maintenance Action, 1987, Cabinet 11.

Eleanor Roosevelt Memorial, 1/18/89, 2/28/89, Cabinet 11.

Mt. Tom Plantings, Inwood Nature Center, Cabinet 11.

Cherry Tree Planting, Cabinet 11.

112th St tot lot, Cabinet 11.

165th Street access to Ft Washington Park, Cabinet 11.

Pruning plan, Cabinet 11.

Bird Sanctuary, 1988, Cabinet 11.

Peter Dunleavy project, 91st St, 9/84, Cabinet 11.

Planting Plan, Fireman's Memorial, 1986, Cabinet 11.

New York Central Railroad, W 172nd St to Dyckman St, Charles Stumpf
Contractor, 12/28/38-1/16/39, Cabinet 4.

Riverside Drive Comfort Station, Theodore E. Videto, architect, approved
4/13/09, Cabinet 4.

New York Central Railroad, W 72nd St to 76th St, Cabinet 4.

Riverside Park electrical layout, Cabinet 4.

- New York Central Railroad, Claremont Park, 122nd St, topographical survey and plan prepared for John D. Rockefeller Jr. by Olmsted Brothers, Brookline, MA, Cabinet 4.
- W 108th to 115th St, Reconstruction of the Stone Retaining Wall at Riverside Park, 1991, Cabinet 4.
- Construction of Pathways and Drainage, Various Locations in Riverside Park, between 73rd and 83rd St and 112th and 119th St, 1988-1989, Cabinet 4.
- New York Central Railroad, W 145th to 153rd St, grading plans, Cabinet 4.
- Topsoil for Riverside Park, West 72nd to St. Clair Place 1936, Cabinet 4.
- Reconstruction Drawings, including 76th St Playground, Skate Park, Paths along Riverside Drive between 72nd-75th, construction of soccer field at West 101st, Cabinet 4.
- West 191st St to St Clair Place Highway and Park Fences in Riverside Park, Vulcan Rail and Construction Company Contractor, 9/24/37-12/15/37, Cabinet 2.
- West 161st St to 168th St, Highway and Picket Fence, North American Iron & Steel Company Contractor, 12/1/37-6/24/38, Cabinet 2.
- W 72nd St to 181st St, Detail of Fences in Riverside Park and Fort Washington Park, Cabinet 2.
- Boat Basin at W 79th St, Cabinet 2.
- Reconstruction of Firemen's Memorial, 1989.
- 79th Street Rotunda, 1989.
- South Lawn work, 1990s.
- 100th St tot lot.
- Tennis Court, Inwood Hill Park.
- Reconstruction of Seawall and Promenade, 1988.
- City of New York Parks & Recreation, Olmsted Center, Flushing Meadows-Corona Park, Flushing, New York, Steven Rizick, Director of Document Services, Capital Projects.
- New York Central Railroad drawings:
- W 72nd to 83rd St, Path Paving, Immick Company Contractor, 5/10/37, 1-9
- W 72nd to 100th St, Landscaping Plans, 1-15.
- W 75th to 129th St, Wading Pools, Walls, Misc, Walter Kidde Construction, Inc., Contractor, 3/24/38, 1-2.
- Electric Facilities, Hoffman & Elias, Inc. Contractor, 5/10/37, 1-5.
- 100th to St. Clair, Planting, Yonkers Nursery Inc. Contractor, 11/22/37, 1-16.
- 100th to St. Clair, Path Paving, Del Balso Inc. Contractor, 4/13/38, 1-14.
- W 83rd to St. Clair, Electric Facilities, Hoffman & Elias Inc. Contractor, 6/6/38, 1-3.
- W 158th to 181st St, Electric Facilities, Hoffman & Elias Inc. Contractor, 10/3/38, 1-12.
- W 83rd to St. Clair, Water Main, Bronx Water Works, Inc. Contractor, 8/25/37, 1-10.
- W 92nd to 112th St, Electric Facilities, Hoffman & Elias Inc. Contractor, 12/8/38, 1-6.

W 83rd to 177th St, Water Main, ClevoRock, Inc. Contractor, 9/8/38.
W 135th to 153rd St, Rehab Riverside Park, Elmhurst Contracting Contractor,
6/17/38, 1-8.
W 72nd to St. Clair, Rehab Riverside Park, Del Balso, Inc. Contractor, 2/11/38, 1-
1.
W 105th to 129th St, Boring and Rock Cores, Sprague & Henwood Inc., 6/4/38, 1-
17.
W 174th St, Resurfacing Running Track, Harlem Construction Co. Contractor,
10/13/38, 1-11.
W 145th to 151st St, Electric Facilities, Hoffman & Elias, Inc. Contractor, 2/17/38,
1-7.
W 83rd to 100th St, Electric Facilities, HZ Altoergh Inc. Contractor, 1/22/37, 1-13.

Henry Hudson Parkway Authority, Contract 3, Dyckman Street Bridge.
_____, Contract 4, Kappock Street Bridge.
_____, Contract 6, Riverside Drive connection.
_____, Contract 7, 232nd St (7 sheets).
_____, Contract 9, Paving.
_____, Contract 11, Parkway Lighting.
_____, Contract 14, Grading, Inwood Hill.
_____, Contract 15, Henry Hudson Bridge, Upper Deck (42 total sheets).
_____, Contract 16, Paving and Underpass in Inwood Hill.
_____, Contract 18, Paving, at 239th and Spuyten Duyvil.
_____, Contract 20, Northbound Parkway Lighting.
_____, Contract 21, Henry Hudson Memorial Park general plan.
_____, Contract 22, Chain link fencing at Dyckman.
_____, Contract 23, Guide rails.
_____, Contract 24, Inwood Hill Park pedestrian overpass.
_____, Contract 27, Henry Hudson Memorial Park, tool house.

Parks Photo Archive, City of New York Parks & Recreation, Olmsted Center, Flushing
Meadows-Corona Park, Flushing, New York, Sony Onishi, Parks Photo Archivist.

M-71, Riverside Park.

X-80, Henry Hudson Park.

X-92, Van Cortlandt Park.

X-142, Riverdale Park.

Annual Reports Collection.

16 mm film, 1938-49, in color but silent, showing City of New York, Department
of Parks, Revenue Producing Facilities, West Side Improvement with
Henry Hudson Parkway.

Metropolitan Transit Authority Bridges and Tunnels, Special Archives, Historic
Photographs, 2 Broadway, 22nd Floor, New York, New York.

“Taken from East Sidewalk, H.H. Parkway Looking North,” Block No. 3408D,
Lot No. 122, Map No. 51, at approximately 321st St at Spuyten Duyvil.

“Taken from H.H. Parkway Looking Northeast,” Block No. 3407H, Lot No. 941, Map No. 42.

“Taken from H.H. Parkway Looking East,” Block No. 3707E, Lot No. 900, Map No. 36.

“Taken from S. Side 239th St. Looking South,” Block No. 3417, Lot No. 75, Map No. 29.

“Taken from Service St. at Martins House Looking South,” (which is 239th St), Block No. 3417, Lot No. 75, Map No. 29.

Series of photographs (6 total) showing emergency pull outs at northbound 83rd St, northbound 88th St, southbound 90th St, northbound 105th St, southbound 125th St.

Northbound entrance ramp and parkway at 158th St.

Series of photographs (10 total) showing construction and views of Henry Hudson Bridge. Some courtesy of Steinman Engineers, photographed by Richard Averill Smith for Steinman Engineers, dates include 6/18/36, 6/19/36, 6/26/36, 7/8/36, 8/7/36.

“Bridge at 147th St and Henry Hudson Pkway. Designed by Madigan & Hyland.”

Series of aerials of parkway.

Map of George Washington Bridge interchange.

New York City Municipal Archives.

Microfilm, MN #4220, Roll 9, DPR #2422-23-24, Riverside Viaduct.

Microfilm, MN #4220, Roll 9, DPR #2455-56, Riverside Drive retaining walls.

Microfilm, MN #4422, Roll 11, DPR #2446-69, Riverside Park 1872 Maps.

Microfilm, MN #4422, Roll 11, DPR #2452-53, Riverside Park 1883 Maps.

Microfilm, MN #4422, Roll 11, DPR #2463, Riverside Park 1900 Maps.

Microfilm, MN #4422, Roll 11, DPR #2469-72, Riverside Park 1920 Maps.

Box 102429, 1939.

Box 102430, 1939.

ADDENDUM TO:
HENRY HUDSON PARKWAY
Extending 11.2 miles from West 72nd Street to Bronx-Westchester
border
New York
New York County
New York

HAER NY-334
HAER NY-334

PHOTOGRAPHS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001